RR
UNIVERSITY OF MICHIGAN
DEC 14 1953
ENGINEERING LIBRARY

Advanced Management

contributor to orderly progress

DECEMBER
1953

VOL. XVIII NO. 12

In This Issue . . .

Engineering Efficiency In Business . . .

Functions of the Committee . . .

Management and the Community . . .

What Are Employees Interested In? . . .

see Table of Contents page 3

SOCIETY FOR ADVANCEMENT OF MANAGEMENT

The Pioneer in Management Philosophy

Remington Rand Methods News

Records can make or break plant operation!

Today's alert manufacturing executive needs the right, simplified record-keeping procedures to help increase output from existing facilities . . . at lower cost per unit!

The highly competitive market that exists today makes it vital for plant executives to be on the look-out for new ways to cut back overhead and step up output per machine. All too often, efficient record-keeping methods are overlooked in the search for more efficient manufacturing equipment. However, we think you will find that the right record-keeping methods, used in the right place, can offer you dramatic new savings and stepped up production. Here are the reasons why.

A piece of paper can disrupt your entire plant

Communication through the proper use of paperwork is vital to smooth, profitable plant operation. If records do not provide management with the right facts at the right time so that they may check on and control work flow through all departments, a tremendous and wasteful outlay of time and money and energy can result.

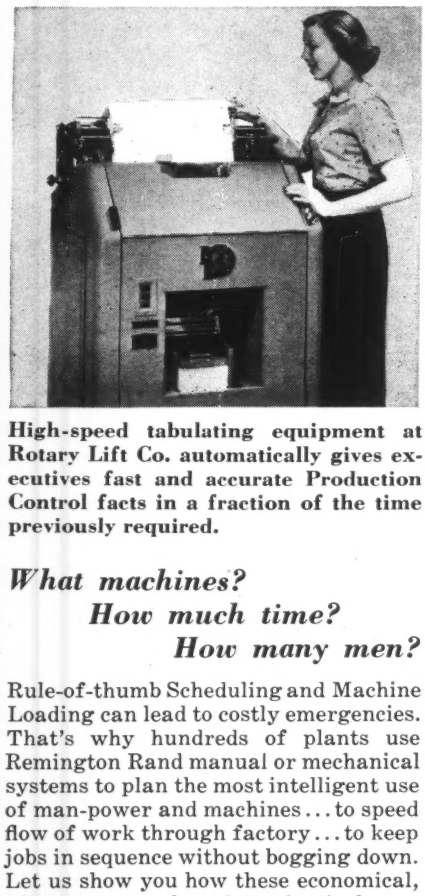
Effective Production Control starts in the Engineering Department

It is in Engineering that Production Control starts. Engineers must understand "how" and "why" manufacturing depends on practical production control techniques. If not, trouble in back ordering, in idle time, shortages, "over expediting" and slow deliveries result.

For the "tough ones" our practical-minded Management Consulting Staff can be called in. These experienced men can uncover trouble spots. They can integrate engineering objectives with production practices by tailor-making the right control methods. They can recommend comprehensive data files for providing fast reference to engineering facts. They can supply specialized equipment for efficiently housing and protecting vital engineering drawings and data. And they can recommend the right types of modern, efficient photocopying equipment for engineering department use.

Materials Management Systems don't cost— they pay!

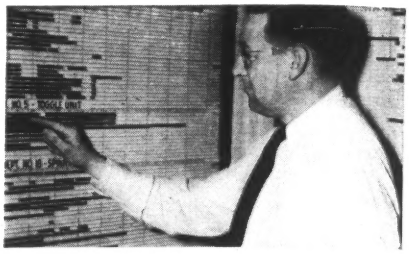
In Material Management you must do more than look at "maximum" and "minimum" figures. Such facts as lead time, value, requirements, availability and economical order quantities must be considered. And here's where your Remington Rand man re-enters the picture. For example, he can recommend an efficient system to develop *precise* material requirements for production scheduling. This is accomplished mechanically and at high speed with punched cards, or with manual methods, depending on the size of your plant's operations. The Remington Rand man may also recommend our Commodity Classification Service. This service: establishes identification by proper nomenclature and numbering; classifies parts, assemblies and raw materials; establishes parts lists, catalogues and data files; establishes interchangeability; etc.



High-speed tabulating equipment at Rotary Lift Co. automatically gives executives fast and accurate Production Control facts in a fraction of the time previously required.

What machines? How much time? How many men?

Rule-of-thumb Scheduling and Machine Loading can lead to costly emergencies. That's why hundreds of plants use Remington Rand manual or mechanical systems to plan the most intelligent use of man-power and machines . . . to speed flow of work through factory . . . to keep jobs in sequence without bogging down. Let us show you how these economical, efficient manual and mechanical systems can be tailored to your needs.



The plant Superintendent of the Aluminum Goods Mfg. Co. writes: "*Since we took production scheduling out of binders and put machine loading on Sched-U-Graph we no longer use 'Hot Lists' to put on pressure.*"

Answer to Fine Machine Loading . . .

Simplified, visible Sched-U-Graph boards are your most effective way to determine which job will run . . . when it will run . . . and in which work station or machine. Used with manual systems *or* high-speed tabulating machines, Sched-U-Graph provides effective dispatching of jobs . . .enables you to check individual jobs in most economical manner.

Whatever your record-keeping needs, you'll find Remington Rand in a unique position to recommend the machines, equipment or systems best suited for your needs. WE MAKE THEM ALL.

FREE! Fact-filled Manual *"Production Control Systems and Procedures"* (X1268A). This manual provides a well-rounded picture of the theory and practice of effective, money-saving Production Control Systems and Procedures. Sections cover: **Engineering Records • Scheduling • Production • Tool Control • Materials Control.** Mail coupon below.

Remington Rand

Management Controls Reference Library
Room 1517, 315 Fourth Ave., New York 10

Yes, I would like to receive a free copy of the manual: "PRODUCTION CONTROL SYSTEMS AND PROCEDURES" *(X1268A).*

Name_____ Title_____

Company_____

Address_____

City_____ Zone____ State_____

1-16

Profit-Building **IDEAS** For Business

Advanced Management

DECEMBER 1953
VOLUME XVIII NO. 12

Publisher: C. A. Slocum
Editor: Will Long

Production Editor ..... Gary A. Lewis
Assistant to the Editor ..... W. S. Brown
Editorial Assistant ..... Mary E. Cawthon
Research Editor ..... Dr. Vincent A. Flynn
Assistant Research Editor ..... Jane H. Schotland
Advertising Counsel ..... Frank E. Fehlman

PUBLICATIONS COMMITTEE

James J. Bambrick, Jr., *Labor Relations Specialist, National Industrial Conference Board, 247 Park Avenue, New York, N. Y.*
Mrs. Wallace Clark, *2 Fifth Avenue, New York, N. Y.*
Don F. Copell, *Vice President, Engineering and Personnel Training, Wagner Baking Corporation, Newark, N. J.*
Frank Fehlman, *110 E. 42nd Street, New York, N. Y.*
Carl Heyel, *Associate Partner, George H. Elliott & Company, New York, N. Y.*
L. C. Morrow, *Director, Special Editorial Services, McGraw Hill Publishing Company, New York, N. Y.*
Al N. Seares, *Vice President, Remington Rand, Inc., New York, N. Y.*
Carl E. Schulz, *Associate Professor of Management and Industrial Relations, New York University, New York, N. Y.*
Ordway Tead, *Editor of Social and Economic Books, Harper & Brothers, New York, N. Y.*
Consultant to the Committee—Robert I. Miller, *Assistant Secretary, Curtis Publishing Company, Philadelphia, Pa.*

NATIONAL OFFICERS: 1953-1954

President—Bruce Payne, *President, Bruce Payne & Associates, Inc., Westport, Conn.*
Executive Vice President—George B. Estes, *Assistant Works Manager, Seeger Refrigerator Company, Evansville, Ind.*
Secretary—J. Bruce McNaughton, *Industrial Engineer, The Jeffrey Manufacturing Company, Columbus, Ohio*
Treasurer—John B. Joynt, *Manager, Administrative Engineering, American Enka Corporation, Enka, N. Carolina*
Director-at-Large—Edward W. Jochim, *General Manager, Chicago Plant, and Member of the Board of Directors, Personal Products Corporation, Chicago, Ill.*
Executive Director—C. A. Slocum
Vice President, Management Research and Development—Ralph C. Davis, *Management Counsel, Columbus, Ohio*
Vice President, University Chapter Operations and Development—Ralph L. Jacobs, *Management Consultant, Cincinnati, Ohio*
Vice President, Chapter Operations—Louis Arthur Lukenbill, *Industrial Engineer, The Link Belt Company, Indianapolis, Ind.*
Vice President, Membership—Harold Fischer, *Professor of Business Administration, Franklin & Marshall College, Lancaster, Pa.*
Vice President, North Central Region—Russell L. Moberly, *Professor of Commerce, University of Wisconsin, Madison, Wisc.*
Vice President, Southeastern Region—Rhett Ball, *Vice President, Bruce Payne & Associates, Inc., Atlanta, Ga.*

ADVANCED MANAGEMENT, published monthly by Society for Advancement of Management, 74 Fifth Avenue, New York 11, N. Y., is merged with MODERN MANAGEMENT, and is successor to The Society for the Advancement of Management Journal, the Bulletin of the Taylor Society and of The Society of Industrial Engineers. Re-entered as second-class matter, December 23, 1949, at the Post Office at New York, N. Y., under the Act of March 3, 1879. Copyright, 1953, Society for Advancement of Management. Subscription rate: $8.00 per year. Single copies: 75 cents (members); $1.00 (non-members). An index to ADVANCED MANAGEMENT is published annually, and the contents are also indexed in *Industrial Arts Index* which is available at Public Libraries. Notification of address changes must be given four weeks in advance.

CONTENTS

Personal Development 4
by Bruce Payne, President, SAM

Management Helps the Community 5
by Richard H. Rich

Individuals Versus the Team? 7
by Harold R. Nissley

Nine Incentive Plans 9
by Ford R. Larrabee

Functions of the Committee 12
by W. R. Spriegel and J. K. Bailey

Robot Restaurants Aid Morale 15
by Charles H. Brinkmann

Engineering Efficiency in Business 17
by G. S. Odiorne and M. Berkowitz

Consultive Supervision: One-Man Show? 21
by C. W. Cook

What Are Employees Interested In? 23
by Peter F. Drucker

Personnel is an Executive Function 25
by W. G. Caples

Scientific Management and Human Relations 27
by John T. Diebold

AM Economics Review 30

Official Release: Operations Research 31

CIPM Reports 32

AM Advertising Review 33

The Management Bookshelf 34

DISCLAIMER: Every effort is made to verify the information published in *ADVANCED MANAGEMENT*. The opinions of the authors, however, are not necessarily the opinions of the Society and this periodical accepts no responsibility in connection with any liability which might develop as a result of articles published. All unsolicited articles, manuscripts, letters, and pictures sent to *ADVANCED MANAGEMENT* are sent at the owner's risk, and *ADVANCED MANAGEMENT* expressly repudiates any liability or responsibility for their safe custody or return.

Personal Development

FROM the moment a company is founded its management is faced with an inescapable dilemma: either the company grows, or it dies.

For a company is essentially people, and people demand growth. Employee morale depends upon it. So does the retention of key personnel—who work, basically, for personal recognition, accomplishment and financial gain.

Stockholders, also, grumble and lose faith when a company fails to show progress, or shows it at a rate behind that of its competitors.

Quite frequently, at this point, definite plans for growth should be undertaken, and the first of these is to determine in what directions the company should expand. Should it attempt to enlarge its market? If so, should some basic change be made in its product? Or should it adopt new packaging? Should it alter its method of distribution? Should a companion product, or products, be added to the line?

The company must then answer such questions as: What potential increase in volume does each of these moves hold? What is the probable cost involved —how soon can the investment be recovered and a profit shown? How should the essential capital be assembled?

The gathering of facts, the making of studies, the plans for accompanying internal changes are the most important items in a company's growth and development. And certainly management demands manpower to meet its objectives.

It is at this point that management requires men who can grow and develop with the company. The best place to look for these men is in the company's own ranks, for here management can tell, by its own observation, whether a man is capable of leadership, of earning the respect of his fellows, and whether he has the necessary interest and ability to assume more responsibility.

It has been found, however, that interest and ability of an individual are developed by his thinking and working with others. Therefore, a man's work in the Chapter activities of the Society for Advancement of Management sparks his imagination and creativeness. His work with others in SAM gives him the opportunity to show leadership.

Personal growth and development of a company's staff are at the core of a company's growth and development.

—Bruce Payne, President, SAM

Management and the Community: The Human Factors of Management

by Richard H. Rich

Leadership that inspires the will to accomplish is the keynote for top management

---

PARTLY for my own education, I have done some research on the development and techniques of scientific management. First, I shall attempt to define those fundamentals which I think form a proper back drop for really good management, and which, in my humble opinion, are essential climate in which successful management must apply its techniques. These fundamentals are in the realm of human relations.

As I understand it, the first concept of scientific management was begun by Frederick W. Taylor in 1880. We have moved a long way since then, as the various types of organizational patterns have been studied, clarified, defined, and applied.

We have developed techniques of work simplification, training, wage and salary administration, merit ratings, planning, statistics for quality control and wage incentive plans of all sorts.

All of these techniques formalize my conception of scientific management, and, over the years, they have become more and more refined and more and more valuable in their application through use.

All of the techniques which I have mentioned involve people—they involve human beings and the engineering of human beings—the human side of management is the catalyst on which the success of all of our planning and all of our techniques succeed or fail.

Good Leadership Must Motivate The Individual

We all know that we can make a perfect organizational plan. We can understand the most modern methods; we can train in techniques to perfection; we can administer the combination of our people with equality and fairness; we can plan the quality and quantity of our production; we can select and place people in the right jobs; we can develop all the incentive plans in the world; we can make the most perfect stew with all of the quality ingredients which we have mentioned here—but without good leadership that will motivate the individual —without those human qualities which so mix these ingredients that they make a perfect brew, they will all be to no avail.

The "proof of this pudding" is the fact that you have all seen outstanding industrial engineers, people with incisive minds, great ability to analyze and point out faults and make plans on a consultant basis; who fail utterly on a line job, due to these intangible qualities of leadership—the qualities that motivate an individual into action—human engineering.

What I am saying, in substance, is that a catalyst cannot work alone any more than an inert ingredient of scientific management can react alone. They must be combined and applied in proper measure and with great subtlety by some human being who has a concept and an understanding of other human beings.

Do not misunderstand me; I do not discount, for one moment, the importance of scientific management. I think that the old-fashioned leader who "plays by ear" has seen his day. I recognize fully that without sound organizational plans confusion exists. And no amount of human understanding or consideration can obtain maximum results. A failure to institute good methods encourages fatigue and frustration. A lack of a definite training program brings a static quality to an organization that fails to stimulate progress and improvement in the individual and in the mass. A failing to understand good wage and salary administration is to assume that good

human relations is a matter of mere "lip service" rather than a recognition of worth in kind and in material progress.

Thus, the magnitude, the success of our final results, is good human judgment measured by the extent to which one uses these inert ingredients.

Using some of them without others leaves us short of the goal. An unbalanced program is like putting the ingredients for a cake into the cake in unbalanced quantities or proportions. The adoption of some principles and the neglect of others again dooms us to failure, but whether you apply them all or just a few, the greatest measure of success will, I believe, be measured by the enthusiasm and the human understanding of leadership in their application.

Sense of Accomplishment is Motivating Force

People must really perform not because they have to perform—not because of fear—not because of necessity, but really because of desire. I have an old cliche which I believe is as fundamental as any single sentence. I learned it a long time ago when at college. A professor of Philosophy asked the class: "What, in your opinion, is the greatest thrill in life?" The answers, in a purely male classroom of boys in their early twenties, were as varied as they were ribald. No one answered correctly, in my opinion, except the very wise professor, who said: *"The greatest thrill in life is a sense of accomplishment."*

This is the motivating force that makes people—businesses—universities—and countries great.

Is not the problem then really:

"How can Management *create and maintain a desire* on the part of its people to improve their performance and to do a better job?"

It seems to me that these are the factors:

1. *Fear:* Yes, I admit that fear has its effect in the background. Fear of poverty—the fear that one will lose his social standing in the community—and also the fear that one will lose his personal pride.

2. *Competition:* The spirit of the game—the ability of a leader to make an employee want "to die for dear ole Yale"—this is the intangible quality that no one has ever defined.

3. *Loyalty:* The loyalty that we can arouse in people—in themselves and in their beliefs—the loyalty that we can arouse in people for the ideas and the objectives and the firm for which they are working—the pride in one's company's position and its leadership—in its chosen field—in its local community—and its national patriotism.

Actually, underlining all three of these factors is the word *Pride*. As I have said, Pride in Accomplishment. Personal Pride (not egotism)—but the feeling that the individual has when he goes home at night—the feeling that says, "I have done something worthwhile today; I am important."

A person who meets the standards of production and quality and conduct, and knows that he can meet them, lives with this pride of accomplishment. His fear is minimized—his loyalty is stimulated—he knows the score as to where he has been and where he is going.

We need more causes.

I have seen engineers frown on this sort of leadership with a cynicism that brands it as a superior type of "cheerleading" or exhortation. They are wrong. For along with all the sharp tools of management which I have given you here, and which you can all read in the books, is the desire that people have for a cause, for a reason, for inspiration.

Now, pride of accomplishment is so basic and native in the human breast that with new tools, properly applied, it is relatively easy to obtain—but pride in a company's position—in its leadership—the glorification of working for that particular company, is very much more subtle and more difficult to attain.

This is a project for Management, and Management alone, and there are no specifics, no tools, no scientific measure of ingredients.

Public Relations: A Way Of Life

It starts, as I see it, with Character and Sincerity. People often ask me to recommend to them a good Public Relations Counsel. My answer is: "You don't need one, for a good public relations counsel is merely an editor—he knows more what *not* to do than what to do, and the real basis of good public relations; in fact, of good human relations is sincerity and character — for good public relations is merely a mirror that reflects the character, the activity, the quality, and the accomplishments of an individual or a company. It is a "Way of Life," and since top management is the emblem or the signature of an institution, it is the specific responsibility of Top Management.

It therefore becomes a primary duty and need that this leadership manifest itself in all of the areas of human accomplishments so that the reflection of the mirror spontaneously places these individuals on a pinnacle of respect and affection in the minds of those who must follow him.

I say there are no specifics—because there are many paths which one may take to accomplish these ends, but a few of the obvious ones are:

1. Participating in civic affairs, by taking a lead in the community in such things as the Community Chest, the Red Cross, our Chamber of Commerce, and our various educational and eleemosynary institutions.

2. In taking such leadership, he provides not only money but his personal interest, his personal time, and even his physical facilities.

3. He is interested in other people; he is interested in politics—not in the narrow, partisan sense, but in the broad sense of making this community and this state and this nation a better place in which to live.

4. He is interested in ideas, and he overcomes his reticence and "sticks his neck out" by believing in these ideas and by preaching them.

Responsible Leadership Creates Best Publicity

If he does all these things, he need not seek publicity, for he makes news. For those who deal in publicity as their livelihood need news on which to survive—and thus is reflected the character and the activities and the accomplishments of the individual and of the business with the accuracy of a mirror.

Therefore, if a leader feels the proper responsibility to the people under him, to the people around him, and to the people above him; if he feels answerable to them for what he does; if he shows a deep desire to live up to their expectations of him and to exceed these expectations—then they, and the community, find him dependable and will look to him for leadership. He will not have to assume it. Thus, business leaders today who are outstanding in their field are making their decisions on a far broader basis than in the past.

Dean Donald K. David, of the Harvard Business School, says:

"An important characteristic of the business leader is the *instinctive* acceptance of responsibility — responsibility not only toward his business but toward his community—his nation—and, even the world." END

Individuals—and a Team—Will Make it Work

by Harold R. Nissley

The technological and the human relations (enthusiastic acceptance) aspects of the installation of a Work Simplification program are both primarily Management's problems. Here are some suggestions for recognizing the individual and group roles in pondering the question: "What type of Work Simplification program—if any—will yield the highest return in man-hours and money?"

WORK simplification or motion economy is nothing more than the organized application of common sense to everyday tasks or work. Work Simplification boils down to two essentials: (1) Finding better ways of doing jobs; and (2) getting others to adopt (enthusiastically) these better ways.

A work simplification program can range from a modest job-by-job improvement program executed by an enterprising plant industrial engineer (or progressive foreman) to in-plant and distant instruction in the technical and human relations aspects of this scientific management tool. What approach should be made at a given time and under certain operating conditions will be conditioned by a number of factors. Top management will, of course, attempt to answer this question:

"At this time, what particular Work Simplification program (if any) will yield the highest return on my investment in man-hours and money?"

Because Work Simplification has eased the man-power and tooling problem for some firms, others have come to believe there is special magic in the words themselves. They either do not stop to consider what has gone into highly successful Work Simplification programs or they think they can perform the same miracles with less time, effort, and expense.

Work Simplification has worked best, by and large, in those instances where management recognized the importance of three groups: (1) the outside consultant; (2) the supervisor; and (3) the operator (and the union).

Finding a better way of doing a job can't always be done, quickly, even by consultants. To be sure the expert can point out obvious improvements (frequently overlooked by local talent because of other daily distractions); these improvements often suggest solutions to other more perplexing problems. But the consultant's main contribution to many Work Simplification programs is the stimulus he has upon the rest of the organization: the plant industrial engineers, supervisors, union and other hourly rated and salaried people. This stimulus comes about in several ways: (1) Usually the outside expert can bring the experiences of other companies to bear on local problems; (2) frequently he is armed with appropriate visual aids and equipment which usually outrun the cost of a course he may be conducting; and (3) he generally has pamphlet and mimeographed materials already worked up so that conferences proceed smoothly and with a minimum of lost time.

In addition to acting as a thought accelerator in a methods improvement program, the expert may be of considerable help in selling new work habits. He might, for example, discourage a management from "springing" new ideas on old operators. Experience (and common sense) has taught him that springing new ideas which involve sudden changes in habits is akin to sneaking down in the middle of the night and rearranging all of the wife's cooking utensils in the kitchen. He understands how much greater is the resentment of an operator whose work habits are abruptly changed without her fore knowledge or consent.

Great as the help is that a consultant may render, the king-pin to a truly successful Work Simplification program is the supervisor collaborating with the consultant and/or his own staff industrial engineer(s). Unless the supervisor is sold on the theory and practice of Work Simplification as it applies to his department, very little tangible good

will come from such a program. One way of selling the program to the supervisors is to give them a foretaste of what it will be like. Call them in for a "sample" conference or session and let them mull it over before a final decision is made to go ahead with the program. Thus, part of the responsibility for the success of the program rests with them after *they* have decided to divert their time and energy to such a program. This seems reasonable when it is remembered that such a program will compete with scores of other pressing matters both inside and outside the plant.

The role of the supervisor will be somewhat that of a catalyst. He will take from conferences those ideas which he believes will work successfully in his department at this time and under present operating conditions; these ideas he will put to work (with or without any further help from the conference leader or his own industrial engineer). There is a saying: "Experts should always be on *tap* but never on *top*." The foreman and the superintendent are the 'top' men in any successful program. The only reason outside help is solicited is someone believes such help can accelerate cost-reduction and labor-saving thinking and action.

This is as it should be. The foreman knows his people better than anyone else in most instances. He frequently knows the limitations of his materials and machines better than most outsiders. He is in a good position to evaluate the importance of various phases of his job and to integrate these phases into the total job.

Just as the supervisor knows more about many of the details of jobs in his department than does the plant industrial engineer (or the consultant), so does the operator know more about his particular job than does the foreman. Many of the operator's ideas are dormant and need just a little stimulating. Imagine the possibilities of a situation resembling this hypothetical shop scene:

Supervisor: "Girls, next Monday morning just after your rest period, I'd like to discuss with you ways of increasing production and at the same time making jobs easier. Let's all be thinking about this between now and Monday. And remember, I am just as interested in making your jobs more attractive as I am getting out more production."

Such a group conference might be called before, during, or after some Work Simplification indoctrination movies, demonstrations, and talks).

Willa Cather once wrote: "Man is the only animal who fights to stay in a rut."

There are two common ways of changing old work habits: by dictum; by education and persuasion. The dictum method is the fast method; but you never can be sure how long the new idea will stick nor what the consequences will be. The practical differences between these two methods is illustrated by the following true story:

The vice president of a printing firm was telling a friend how his company planned to change over their lighting system during the next twelve months. The friend said: "We plan to do the same thing; but we expect to do it in two weeks—during the summer vacation."

Although a highly progressive executive, the VP did not change his new lighting schedule. Having taken one of the country's leading courses in Work Simplification, the VP went the full gamut on the selling phases of a "radical" departure from a 25 year old lighting system. He knew he had to because he was dealing with some of the most reactionary of trade unionists—printers.

Instead of hanging fluorescent luminaries high and out of sight, he instructed the electricians to put them directly in front of the shop craftsmen. Thus between the VP and the electricians one of the worst lighting installations in lighting history was executed—in one section of one department.

As was expected, the craftsmen and the union officers complained so bitterly about glare, headaches, heat, ad infinitum, that a meeting was finally called. It took two meetings to evolve a lighting system that was every bit as good as that worked out by nationally known lighting experts whose plans were laid aside at the beginning because of their radical nature. (It should have been as good; it was the original plan, but the craftsmen thought it was theirs.)

Several months afterwards the VP met his friend again and asked him how his people liked their new lighting system. "I could have saved our company $75,000 and a *strike*, if we had never tried to improve the lighting," came the reply.

The foregoing story illustrates a basic point in modern management philosophy. The executive above who exercised his right to manage even in those things affecting the happiness and welfare of his people ended up with a strike.

Obviously an enlightened management cannot let its people in on every decision affecting the company and their welfare. But the more the people are left out of such decisions, the wider becomes the gap of suspicion and distrust and even open violence.

A well conceived Work Simplification program should include three important groups, for optimum results: 1) outside professional talent; 2) supervisory help and collaboration; and 3) operator help and collaboration. Such a program can make work easier, increase production, spin out labor, materials, and machines during a critical shortage of all three, cut costs without hurting anyone, and be fun doing it! END

A NUMBER of years ago a company employing about three hundred men, which had been manufacturing the same machine for ten to fifteen years, sent for us to report as to whether any gain could be made through the introduction of scientific management. Their shops had been run for many years under a good superintendent and with excellent foremen and workmen, on piece work. . . .

The test machine selected fairly represented the work of the shop. It had been run for ten or twelve years past by a first-class mechanic who was more than equal in his ability to the average workmen in the establishment. In a shop of this sort, in which similar machines are made over and over again, the work is necessarily greatly subdivided, so that no one man works upon more than a comparatively small number of parts during the year. A careful record was made, in the presence of both parties, of the time actually taken in finishing each of the parts which this man worked on. . . . so that the workman should work according to the new methods, one after another, pieces of work were finished in the lathe, corresponding to the work which had been done in our preliminary trials, and the gain in time made through running the machine according to scientific principles ranged from two and one-half times the speed in the slowest instance to nine times the speed in the highest. . . . *from The Principles of Scientific Management, by Frederick Winslow Taylor, Harper & Brothers, 1913.*

Nine Incentive Plans In A Two Hundred Man Plant

by Ford R. Larrabee

Incentive plans must vary according to the personnel they affect. They are human relations in practical action. This is not news to the alert management man. But what should such plans contain; how should they differ? How be alike? This article covers the incentive plan area fully, with a discussion of nine plans covering foremen, manufacturing and financial department heads, sales department employees, the plant engineer, laboratory heads and employees, the clerical force, and finally the strategic senior executive group

THERE could probably be some eyebrow lifting over the figures "9" and "200."But let us sketch briefly the the events which led to these figures, tell something of the detailed workings of the plans, and then the results obtained, along with some conclusions concerning them.

First, the evolution of Nine Plans, Cincinnati Industries Inc. is a paper converting manufacturing plant. As such, we have rather heavy and fairly complicated creping equipment, manned by machine crews. This is our basic or heavy equipment. In addition, we have a range of so-called secondary machines, likewise manned by crews, which include such things as cutters, rewinders, printing presses, embossers, power balers, and the like. Finally, we have bag fabricating production lines, individual power sewing equipment, inspection operations, etc. There are, of course, the usual service operations as Shipping and Maintenance. In our plant we employ both men and women and have fully machine paced, semi-machine paced, and a variety of so-called hand paced operations. Our organizational set up includes a Vice President In Charge of Sales, responsible for Sales, Sales Statistics, Advertising and Promotion; a Treasurer, responsible for Cost and General Accounting, Payrolls, Order Entering, and Office Services; a Division Head in charge of Product Development and the Laboratory function; and a Vice President in Charge of Manufacturing, responsible for Plant Production, Engineering, Purchasing, Personnel, Methods and Time Study, and Scheduling. These division heads report to the President of the Company and to the Board of Directors. This is the framework into which our incentive plans fit.

Incentives Installed In All Divisions

The first plan used by the Company was installed in 1929 and was applied to production workers in the shop. It has been in continuous existence since that time, has been improved and expanded from time to time, although the principles have remained. From now on, I'm in the period of years commencing in 1946, up to the present. The success of the Foreman Plan early in this period was such that we began to wonder whether other department heads in the Manufacturing Division could be grouped under some type of measurement. Department heads in the Financial Division were included, and the plan started. Then things began to happen!

We began to discuss the possibility of a top executive incentive plan and found the proper approach appeared to be an overhaul of our costing system in order to get proper controls and measurements for such a plan. This was accomplished, and a plan started, along with plans for the selling organization, the head of the laboratory, and the Plant Engineer. This brought us to the point where there were only two groups of any consequence not covered—the clerical force, and the laboratory and sample room employees, and they did not remain in this position for long. So there you have plans for the plant: the Foremen, which includes the Plant Superintendent; Department Heads in the Manufacturing and Financial Division; Sales Department employees; Plant Engineer; Head of Laboratory; Laboratory employees; the clerical force; and the Senior Executive group. If my arithmetic is correct, this adds up to nine.

Now, something of the detail of the plans to give you at least an idea of their workings, and in so doing, I would

like to point up the manner in which the various measurements accumulate to accomplish top executive control, and thus effective and profitable management.

First, some preliminary definitions. The basic measurement in the plant is a unit of work. It results from Time Study and is a properly coded and relaxed man-minute of work. 60 units earned per hour is standard and is the basis for costing. If an employee earns 80 units in an hour, he is said to have earned an 80 unit hour and is paid for 80 minutes of work. There is no limitation on the unit hour an employee is allowed to earn by rule or policy—only by top machine speeds and quality of product. These units are used extensively as a basis of measurement — incentive plans, costing, sales analysis, expenses, etc.—sometimes by themselves, but most commonly in terms of cost per thousand units.

Relationship of Wage Increases And Over-All Productivity

Costing is performed on a "Normal" basis, which is the expected volume in terms of units on one hand, and the estimated cost of producing the volume of units on the other. Production efficiency is measured against budgets which fluctuate with actual unit volume, with normal budget being one point on the volume line. Whenever volume varies from normal, the difference between its budget and normal budget is taken up as volume gain or loss. Whenever actual costs vary from budget at any actual volume, differences are referred to as operating gain or loss variance.

The first plan we refer to as the *Plant Incentive Plan.* It applies to individuals in the case of single, hand work operations; to groups in the case of production line operations; to machine crew groups; and one other category worthy of mention—the Shipping and Receiving Crew. In each case the duties performed are time studied; a 60 unit hour basis is established, and payoff is on a daily or shift basis. The controlling factors are units earned, measured against standard, and the percent of time worked on incentive.

At this point I would like to offer another idea we are currently employing, which is not an incentive plan in the strict sense of the word, but was made possible because of our Plant Plan and the measurements pertaining thereto. At the time of the first round of wage increases, we found ourselves in the position of having to grant a substantial increase, which we were willing to do, *provided* we had assurance we would get productivity for it. Our negotiations resulted in agreement that 11¢ of the increase granted would be applied in this manner: it would be paid to producers only for those hours they were working on standard, were on productive work, and were working at or better than a 60 unit hour standard pace. You would be surprised at the rate at which less-than-standard performances disappeared, and the welcome pressure put on Management to issue standards for all productive operations. Further, it seems to be a quirk of human nature; once they have achieved a standard pace on a job, to move quickly from that point to substantially above standard performance.

To complete the plant picture, I wish to list as the second plan, our new *Maintenance Incentive Plan.* This is a group plan participated in by all members of the Maintenance and Boiler Room Departments. It is on a weekly basis and has two measuring elements; Maintenance labor cost compared to a budget for various Dyer Unit volume levels, and the other, which to me is quite novel, a machine breakdown factor, which works like this, in effect: A fund is created, the full amount of which is available for distribution as bonus to the group, provided within a week there are *no* machine mechanical breakdowns. When breakdowns occur, this fund is debited at a rate per hour of breakdown, which varies with the importance of the equipment. These two elements combine a percent of base pay bonus for the week. Well, in just a few weeks time, expensive Saturday and Sunday pay has become less attractive to these men, there is a definite interest in *preventive* maintenance to keep machines from breaking down, and once a breakdown occurs, there is all-out effort to get operation resumed at the earliest possible moment. An extra dividend of this plan is the fact it permits paying skilled mechanics, firemen, and millwrights more pay (on a measured basis) than is possible without extreme negotiating difficulty when working with an industrial type labor union.

Plan Three is the *Foremen and Superintendent Incentive Plan.* Each foreman builds up bonus credits for himself based on the unit hour average of all the employees under his supervision, and the average percent of time on standard in his department. Each supervisor obtains a further bonus credit on a factory labor cost factor which is stated in terms of the labor cost progress made in any week from an undesirable labor expense toward perfection. The Plant Superintendent earns credits based on the same factors, but using the all plant average in each case. I have previously stated that this plan has endured some hardships over the years, but in recent years this has not been true, and the key to its present success has been the educating of the participants to a through understanding of its workings. This theme is another whole subject, but I would like to say in passing that, in my opinion, no incentive plan is likely to succeed unless the participants in it are thoroughly and continually educated as to its detail and its potential.

Plan Four concerns the *Engineer Incentive Plan* and is designed to encourage him and his department to provide equipment design and changes that will reduce raw material waste. The measurement is against waste allowances that are included in the costs.

Plan Five is the *Department Head Plan* which currently involves the head of the Order and Cost Department and the Office Manager, who report to the Treasurer; and the Personnel, Scheduling, Time Study, and Purchasing Department Heads who report to me. The incentive in this instance is to promote the plant production of primary machine units; these machines being the basic creping machines, over which all paper received is processed. Here the contribution is not so directly measurable, but it takes the form of quality raw material purchasing, and on-time deliveries, to avoid slow-downs and shutdowns; prompt and fair setting of standards by Time Study; hiring and scheduling efficient workers by Personnel; efficient arranging of Orders by Scheduling; and so on. As these Department Heads supervise the personnel in the Clerical Workers Plan, the bonus earned from the plant production factor is modified by the results in that plan, making it to their interest to assist in its success.

Is It Possible Accurately to Measure Clerical Work?

Next, the Sixth is the *Clerical Workers Plan* and the one a lot of people said couldn't be done! In this plan are the payroll clerks, stenographers, secretaries, bookkeepers, the nurse, and clerical employees in general. This is a monthly plan and is on a percent of salary basis. To encourage cooperation between departments, the same percent applies to all participants. There are three basic elements of measurement.

The first are units earned against standards which were set by historical analysis rather than by the stop watch. Some of these are: units for each stencil typed, each cylinder transcribed, each check written, each order entered, each invoice rendered, each employee's pay computed, etc. There naturally were some jobs that could not be standardized, such as secretaries, and these employees are granted a constant number of units for a substantial portion, but not all of their time worked. In the time not allowed, their incentive is to help out on other jobs where units can be earned. The second measurement is a bonus unit affair for completing control reports, such as financial statements, operating reports, and the like, at times earlier than the scheduled ones. For example, I receive each week a control report on labor cost in the plant for the previous week. If I get this on Friday, there are not bonus units; on Thursday, a modest number; and on back to Monday, where the reward is handsome, and I have gained the distinct advantage of being notified within hours of danger points that require prompt attention. Lastly, to control the salary expense of the group, the toal time worked completes the list of measuring elements.

Sales Incentive Plan Includes Branches

Seventh, is the *Sales Incentive Plan*. This plan is concerned with all home office employees of the Sales Division, and many of those in branch offices. The three measuring elements are mark-up, volume in units shipped, and sales expense. I mentioned earlier that costing is performed on a normal basis, as to volume and expenses. Our Manufacturing Division, in effect, sells to the Sales Division at this normal cost. The difference between that cost and Selling Price is referred to as Markup. What we are interested in is dollars of Markup, rather than percent—both percent and volume produce this. The second element is volume expressed in terms of primary machine units to give emphasis to sales of the desirability of high plant activity. The expense factor concerns those items budgeted against Sales, such as salaries, travel expense, and the like.

Plans Eight and Nine, namely, the *Laboratory Head Plan* and the *Laboratory Plan*, have in the first instance essentially the same factors as the Sales Plan, and for the Laboratory generally, the same as for the clerical force.

Lastly, and by no means the least, in terms of my personal interest, is the *Executive Plan*. In detail, this plan is actually made up of all the measuring elements I have mentioned for the other nine, plus control of Manufacturing, Fixed Overheads, and Administrative expenses, that are not included in the other measurements. This plan is participated in by the top executives, on a share of the bonus pool created basis. As all of the measuring elements are consolidated into P & L and subsidiary operating statements, the measurements in simplest form become profit or loss from operations and markup.

Productivity and Cooperation; The Plans Actual Payoff

So much for a sparse smattering of the detail of the ten plans. As we hurried through it, the impression may have been created that they are unrelated in that they do not point to some single objective. They are in my opinion directed toward the production of business at a profit, with just rewards for those assisting in the accomplishment of that goal, without injuring the creation of sufficient funds for payment of dividends and purchase of new and replacement tools with which to perform an efficient and expanding business job. Please do not be misguided by the statement I just made. These incentive plans are *not* a profit sharing affair. The profits or losses of the Company have nothing to do with ability to earn bonus under *any* of the plans except the one pertaining to the top executive level. One way of looking at the efforts of a Company, is to say it is endeavoring to lower its costs, obtain a satisfactory spread between cost and selling price, and promote greater sales volume; to the end that it will have money left to operate, grow, and pay its owners. When all incentive "teams" are earning bonus dollars, there is *control* that promotes profits or reduces losses.

Now as to results a little more specifically. First, you may be interested in the payoff to the participants, and secondly, to some actual result experiences: Producers in the plant consistently earn from 25% to 30% of their wages in bonus. The Maintenance Plan, while still growing, has already reached 15%. Foremen earn from 40% to 50%, Department Heads 30%, Clerical 25%, and so the story goes throughout. I admit that all this adds up to a terrific bonus or premium bill to the Company, but we do not begrudge a dollar of it, and here are some of the reasons:

One of the headaches of business during the post World War II period has been a lack of increased productivity in a wage spiral cycle. We, for example, compared our wage level in 1946 to the level in 1940, and found it had gone up about 45%, and I should say *only* about 45%, whereas our labor costs in terms of productivity had gone up over three times as much, or 151%. By 1949, wages had risen to 115% vs. 1940, but the cost of productivity had gone *down* to an 88% increase. The correction of the situation during the period without labor strife was in a large measure effectuated by means of the incentive plan tool.

These plans, with their attendant control analyses, have pointed out, and put out the unnecessary roust-abouts, psuedo-mechanics, stand-in-one-place shipping and receiving personnel, and the sleep-in-a-corner broom pushers; all classes of employees with whom neither business nor progressive employees can have much hope for the future. There are many more examples that help make the story. The way in which office people, who formerly attended to nothing but their own work, now seek to help others and how they actually resist increasing the personnel by offering to split up work; the very substantial reductions in material waste percents that have been effected; the reduced labor turnover; the way the sales personnel promptly advise that costs are out of line in terms of obtainable selling prices; and many more specific things. What's it all worth? We sincerely feel it's worth the time and expense of administration and a sum of premium and bonus money that in a year's time achieves a figure we would consider a very nice profit! And we have not been doing business for fun!

Incentives Plus Sound Cost System Equal Success

Briefly, a few words in conclusion. The success of incentive plans — certainly ours — is dependent on at least these things: An initially sound plan, resulting from considerable thought and counsel, and one that is not a gratuity, but pays off for *results;* initial and continuing education of the participants; an adequate and complete set of control and result reports for top Management and for participants in each plan.

With a sound cost system incentives will go far to keep it controlled and improving. I believe they'll do more than just "go far." **END**

Functions of the Committee: The Real Uses of A Much-Abused Form of Group Operation

by William R. Spriegel and Joseph K. Bailey

The actual functions and uses of the committee form appear at first thought so familiar as to need no repetition. Yet the group form that distils the talents and thinking of many into a single operative entity is more often misused than not. Here is a restatement of the facts: what a committee really is, how it should operate, how it can be used, the difference between chairman and members and their functions, and at last how the committee form can be best used to facilitate various types of management decision

GROUP action is becoming increasingly characteristic of American management, especially in large corporations. As Companies have expanded and become more complex, committees have been set up in greater numbers to cope with problems which have been considered too difficult or too big to be handled by any one individual. However, there is probably no organizational instrument that is more misused than the committee. Relatively few people fully realize that the committee to be effective must be an entity in itself and has no reason for being unless thus conceived.

A committee may be defined as a group charged with a specific assignment, possessing an entity of its own, discharging its responsibility as an entity.

The members of a committee bear joint responsibility, but that does not relieve them from acting as a single unit. By its very nature, the committee structure places definite responsibilities and restrictions on its members while they are acting as committee members. They should fully realize that their purpose is not to endorse any individual opinion but to develop the best collective judgment of the group as a whole. This method of action demands that the committee members be aware of the necessity for objectivity and be skillful in the art of integrating diverse ideas into a single most acceptable idea.

Committees are usually established to aid a major line official in the performance of one of his executive functions. Thus, the committee may very well be considered as a distinct type of staff organization.

Committee Plans, Takes Group Action

Committee members should seek the facts pertinent to the particular problem at hand, strive to interpret these facts in terms of the assignment in the light of the objectives of the organization of which the committee is a part, decide upon a course of action, and report this decision as a committee decision. Effective committee membership requires of each member a sincere regard for the personal integrity of other members, a willingness to strive to understand the viewpoints of colleagues, a willingness to work hard to make a contribution to the committee, and an honest attempt to arrive at a meeting of the minds that results in a decision.

It is the opinion of many students of organization that the committee under certain conditions may logically be used in the following ways:

1. **For decision-making and policy determination.** It should be noted that the committee is not considered a very effective instrument for decision-making; and (although it ranks much higher in the formulation of objectives, the committee cannot perform this function any more effectively than can an individual. However, one aspect must not be overlooked. Both decision-making and policy formulation can be strengthened through the use of committees since the committee can be used advantageously in achieving a unification of outlook which is highly desirable for coordinated effort. (This is a distinctly different thing from giving the committee the responsibility for decision-making or formulation of objectives.) Being a participant in these functions facilitates a more thorough understanding and appreciation of all the ramifications involved and thus may lay the groundwork for having the decision or the policy accepted and executed properly. Whatever action is taken is most likely

to give consideration to the interests of all divisions or departments concerned. This feature may easily have the disadvantage of resulting in a compromise rather than the most logical action. Vested interests frequently have an undue influence in committee action.

2. **As a coordinating agency.** The chief executive may establish an operating committee of his division heads which may render invaluable service in coordinating activities. When the coordinating committee discusses any program or project each division head learns what is required of his unit and when. If the requirements are such that they cannot be met without increasing the work force, adding an additional shift, or purchasing new equipment, these facts can be made known and steps can be taken to bring them into being, or the requirements may be changed so that present manpower and equipment can take care of the job.

All that is necessary for men of good will, who are thoroughly trained and indoctrinated in company objectives, is to give them the facts, and they will live up to expectations. The committee discussion of the total requirements gives each member an opportunity to learn all the facts and to harmonize any differences of opinion.

Committee Actually Does Not Secure Coordination

Actually, it is not the committee that secures the coordination but the general manager's discussing requirements with the group. Coordination, then, is a by-product of the instruction and advice by the general manager and the advice given the members of the group by each interested party. Coordination is effected through the authority of ideas and instruction—not through the authority of the committee as an entity. As a matter of fact, coordination can usually be achieved immeasurably better by a specialist or functional department than by a committee acting as an entity trying to achieve it. This statement in no manner is intended to depreciate the group discussion of common porblems as a means of disseminating information and harmonizing differences of opinion. It simply indicates that in many cases committees are used as a method of coordination because of lack of experience with other methods.

3. **As a judicial or jurisdictional agency.** Surveys indicate that the handling of jurisdictional disputes is one area in which the committee definitely is the most effective organizational instrument. Suppose that two or more divisions or departments differ in their interpretation and application of a newly-established general policy. Of course, the correct interpretation might be obtained directly from the board, the president, or whoever had formulated the policy originally. Using a committee in this situation, however, will be of great aid in maintaining willing cooperation since all interested parties will be involved in arriving at the proper decision. Naturally, such a committee can function much more positively by meeting before any chance is allowed for misinterpretation or misapplication.

4. **As an advisory agency.** Acting in an advisory capacity, the committee can be an especially strong device for giving balanced advice to the line organization. The committee inherently brings many viewpoints to bear on the problem. It is less likely to overlook important considerations than is a single department or single specialist. The advice may not be completely impartial, but it is less likely to be biased as might be the case if the decision were handed down by a person who is not and often cannot be aware of all the facets of the situation.

5. **As an educational agency.** The committee is particularly helpful in teaching new supervisors and executives the necessity for giving weight to other people's opinions and sentiments; it also reveals what these sentiments are. The committee also enables a new executive to get the feel of the organization in a manner almost impossible to get on any other basis save by a very long experience in actual operations.

The committee also has merit in facilitating the acceptance of an innovation or marked change. Committee consideration tends to cause its members to feel that they have been considered in the decision and have not been forced to accept something which they did not want.

Six Ways to Increase Committee Efficiency

So much committee time is usually wasted that it is desirable to consider methods of increasing committee effectiveness. Among the procedural factors that should be considered are:

1. **Definition of objective.** As previously indicated, a committee should be formed only if there is some definite task to be accomplished. It is highly important that all committee members clearly understand the specific objective to be reached by means of group action. Implicit in this statement is the corollary necessity for clearly defining the scope of authority and responsibility.

From the over-all viewpoint, a company which makes wide use of committees needs some master plan for committee classification as an aid in clearly defining the objective and scope of committee action. On what level does the committee function? An organization often has a departmental counterpart of a divisional committee—on product planning, for example. Proper delineation should be made between the two. Is the committee to be a standing or temporary one? What degree of authority will the committee be given? Such issues as these point up the desirability of some type of committee classification as an aid in defining the objective and scope of committee action. Such a plan should be kept as simple as possible for optimum effectiveness.

Size of Committee is Determined By Purpose

2. **Size of the committee.** The purpose of the committee is significant in determination of size. A 30-man committee by its very nature must be a deliberative body—which may be the reason for the committee's being. Less than 5 or 6 members creates a problem of securing effective group effort. More than 10 or 12 makes it difficult to reach an integrated decision.

3. **Selection of members.** The chairman of any committee occupies a most strategic position, and he must be chosen wisely else the whole purpose of the committee may be defeated. He should not assume a role of domination;

The other members of the committee should be selected on the basis of how much they can each contribute to the specified objective of the committee. Maintaining a balance between different points of view is of prime importance. Using some method of staggered terms of service in order to provide continuity is a matter not to be overlooked in manning a standing committee.

4. **Secretarial and staff aid.** For most efficient operation, a committee must be given adequate assistance in order to provide these necessary services:

a. To prepare, under the guidance of the chairman, an agenda for each meeting. This should be placed in the hands of all committee members far enough in

advance that they may give careful consideration to the items to be covered prior to the meeting.

b. To perform any research or gathering of necessary facts as may be needed by the committee.

c. To keep accurate records of committee action, a copy of which will be given to each member.

d. To perform any required follow-up actions which need not be done by committee members themselves.

5. **Time and frequency of meetings.** Meetings should be so scheduled as to interfere least with the regular work of the members. Due regard should also be given to the personal convenience of the members, with relatively few meetings scheduled for other than regular working hours. It must be remembered that committees are expensive; therefore, no more meetings than are actually necessary should be called. Observance of the preceding suggestions will be of value in this respect.

6. **Results of committee action.** Some procedure should be established by which a committee can be informed of any specific actions which have been taken as a result of committee decision. In this way the committee can be kept constantly aware that its work is helping to achieve results. Thus, it serves as a direct incentive for them to expend their best efforts as committee members.

Costs of committee work tend to be very high when one considers the time consumed by its members as equated by the proportion of their salaries to which this time would be equivalent. There certainly would be fewer committee meetings if their costs were revealed to the persons responsible for those committees; furthermore, meetings would be better planned and their objectives more clearly defined. Substitutes for committees would often be found, perhaps by means of a revision of the organization structure. Committees are frequently constituted to take care of a situation that would not have arisen had there been good organization.

Finally, it must be remembered that committee action is a poor substitute for sound executive action arising in an atmosphere of efficiently conceived organizational structure and administrative practice. Yet the committee can be invaluable in the following areas:

1. As an agency for facilitating coordination and the acceptance of a new or changed program.

2. As an advisory agency to get a balanced view. It is not suited to research or fact finding; yet, it may be helpful in formulating a research program or a fact finding procedure.

3. As an educational agency for new executives particularly as a means of enabling them to get the "feel" of the organization and its sentiments.

4. For decision making that requires the harmonizing of many viewpoints and interests. It is likewise helpful in checking policies although not very efficient in the original formulation of policies.

5. As a judicial agency to interpret policy application so that the over-all objectives of the company remain paramount yet individual objectives receive consideration.

6. Among men of the same caliber many excellent ideas and combination of ideas originate.

7. Among men of different classes and levels, committee action tends to iron out differences in points of view—between labor and management, for example.

8. The committee may be used effectively for many special functions—such as helping to select a new executive for the organization.

These inherent disadvantages of the committee must be remembered:

1. As a control device the committee is weak, since responsibility can so easily be divided.

2. The element of compromise is very difficult to eliminate. This may easily lead to distortion of the real objectives.

3. The committee is weak in performing the executive function. The committee must not be used as a means of covering up indecision on the part of a responsible executive.

4. It is a poor substitute for proper organization.

For a committee to be truly effective, its members must learn to give and take, to learn each others' strengths and weaknesses, and to work for the common objective. This ideal cannot be achieved save through long purposeful effort and experience. END

THE conference, as an oral exchange, increases clarity and secures acceptance where they might not otherwise be forthcoming. As a social situation, it produces interactions between several individuals, between individuals and groups, and between groups and groups. Experimental findings have demonstrated that the mere fact of close physical grouping—even when no discussion takes place—affects the behavior of the individuals involved. Conferences differ from either conventional interviews or lecture meetings in the quantity and extent of interaction among individuals. Although any audience is, in a sense, a group, the primary interaction is between the speaker and individual listeners.

The conference offers one of the few opportunities within a formal organization for an individual to escape from the confines of positional communication. Group discussion also affords a means of relieving tension, sometimes—because of the feeling of group support—more effectively than does a personal interview. Successes with group psychotherapy testify to the value of discussion for discussion's sake.

In administration the conference is more important as a medium for sharing knowledge and securing more effective action. Although an individual alone may think more profoundly, he cannot normally develop the variety of ideas that grow out of group interchange. The conference draws together bits of information and experience from many limited positions and puts the data into broad organizational perspective.

By definition, conferences are not media for the one-way transmission of orders and reports: they are used successfully when they precede, parallel, or follow such transmissions. Studies of learning, perception, and motivation indicate that lectures may be as effective as conferences for *teaching* something, but no method surpasses the small group discussion for production action. . . .
—Charles E. Redfield, Communication in Management, P. 214.

Robot Restaurants as Aids to Morale

by Charles H. Brinkmann

The automatic phase of industrial feeding is developing rapidly as the defense emergency creates new problems and as studies indicate that food and drink vending units are popular and have an anti-fatigue value

UNDER the impact of peak production demanded by our current defense economy, managements have been busily re-gearing their physical plants to cope with revamped needs. And while materials and methods have occupied most of the limelight, the problem of manpower is rapidly gaining equal recognition. For as the industrial pattern of World War II begins to repeat itself, once again the labor market has become competitive.

Under such circumstances, employee conveniences become a management asset, and the problem of food facilities gains prime importance. Over the past decade, most plant administrations have come to recognize that a well-fed worker is generally a better worker. On-the-job food service has been credited with improving morale, promoting employee health (and thereby decreasing absenteeism), and tending to increase output.

Since food service programs obviously vary from plant to plant, they must be developed locally to meet individual needs. In general, however, they aim to conveniently provide quality food at reasonable prices. Until quite recently, on-the-job feeding media were largely manual, with dining rooms, cafeterias, snack bars, and mobile carts utilized individually and in combination to varying degrees. Modern developments in automatic merchandising techniques, however, have ushered in a whole new era in industrial catering. Coin-operated vending machines, utilized either to individually provide mid-shift snacks, or in a group as "automatic lunchboxes" that furnish a full-fledged bill-of-fare ranging from sandwiches and pastry to hot and cold beverages, are meeting current industrial requirements.[1]

The small factory, which has generally found manual food facilities either impractical or uneconomical, is utilizing self-supporting vendors as an answer to employee meal-time needs. At larger plants, the "robot restaurant" supplements over-the-counter facilities" making snacks conveniently available at *all* hours to provide a refreshing "pick-up" and offset mid-shift fatigue. And, as more and more establishments begin to function on a stepped-up work schedule, the coin-operated cafeteria is ideally suited to provide round-the-clock food service for odd shifts.

Some idea of the potential value of vendors can be gathered from this comment on a survey of the use of milk machines (in some 15 industrial plants ranging in size from 40 to 2,400 workers) made by the New York State Department of Labor, Division of Industrial Hygiene and Safety Standards:

"All plants felt that the workers interpreted the availability of milk in the plant as an indication of interest on the part of management in their health and welfare; and worker morale and labor relations were greatly improved thereby. One plant expressed the conviction that their milk dispensing machine was an important factor in their recent contract negotiations and that it actually contributed to preventing a strike."[2]

Typical of the smaller sites utilizing automatic merchandisers to provide on-the-job meal service for its employees is the Ford Motor Co. export office at the Harborside Center in Jersey City, N. J. With the eating places in this dockside terminal quite busy during the lunch hour, Ford decided that its employees

1. Yohalem, A. E., *Automatic Lunchbox*, VEND, Sept., 1950.

2. Mayers, M. R. and Brenner, F., *Milk Dispensers for Industrial Plants*, MONTHLY REVIEW, Division of Industrial Hygiene and Safety Standards, N. Y. State Dept. of Labor, Oct., 1950.

could be better served through their own dining facilities. However, since this organization had less than 400 workers and only a limited amount of floor space, over-the-counter service was not only uneconomical but impractical to fill the bill, a coin-operated cafeteria was installed, with vending machines serving sandwiches, milk, ice cream, pastry, coffee, etc. Ford employees not only became regular patrons of the machines at mealtime but found the vendors a handy source of energy-building snacks during the day.

At the huge Frankford Arsenal in Philadelphia, where the Army Ordnance Corps is engaged in armament work, "automatic lunchboxes" supplement the cafeteria and snack bars that serve thousands of civilian workers dispersed over a wide area. Sandwich, cake, milk, and ice cream vendors are on duty at strategic points around this sprawling installation to meet the needs of employees in outlying buildings and to provide food service when the manual outlets close.

To management seeking either full-scale or snack food service, automatic merchandising offers the following advantages:

Economic. Since the equipment is owned and operated by a vending machine firm on a concession basis, no capital outlay is required by the plant. Vendors make sales *without* attendants, and management does not have to provide any operating personnel.

Time-Saving. Vending machines are geared to split-second operation at the drop of a coin, and they can actually serve workers much faster than food can be dispensed manually over-the-counter.

Space-Saving. Occupying a minimum amount of factory floor space, compact coin machines eliminate the need for food preparation areas, kitchen facilities, etc. Machines are stocked by the operating firm, which brings in the products.

Flexible. The vendor set-up can be expanded or contracted through the addition or removal of machines to meet fluctuating needs, and equipment can be readily moved from one working area to another to follow shifts in factory population.

As in the case of any food service program, the success of a factory vending machine operation will depend on such considerations as the number and income-level of the workers patronizing the vendors; availability of other food facilities; type of labor workers perform; hours of plant operation; length of "break" or rest periods, etc. Supervisory attention should be paid to the menus featured in coin-operated cafeterias to insure that the bill-of-fare is palate-pleasing and meets the employees' needs. In Pittsburgh steel mills, for example, where workers require a large liquid intake, vendors feature full pints of milk and chocolate milk, but in lighter industry, where women predominate, the smaller-sized half-pint is in vogue.

While the scope of an automatic merchandising program and the amount of available floor space will govern the number of machines to be employed, types should be utilized which provide workers with a variety of nutritive products. Importance is also attached to the location of the machines, which should be placed in clean, safe areas where they are readily accessible to a maximum number of employees.

Experience has shown that workers actually appreciate management's interest in providing meal service and snacks via vendors, while their improved health and decreased afternoon fatigue results in better dispositions and increased output. Evaluated in this light, automatic food facilities are coming to be regarded as a no-cost investment in labor relations that pays off. END

Effective Communications Are Also A Basic Morale Factor . . .

In a little factory, the exchange of information between the working force and the ultimate boss is, or should be, as normal as breathing. Nothing is required except a candid attitude.

But in a company like ours, with more than 90,000 employees, the president and the other officers cannot get around to talk with employees or even with all members of management at any frequent intervals. Even the works manager of a factory with, say, 3,500 employees is chained to his desk and telephone to a large extent. So we have to find some artificial method for giving information. . . .

First is a weekly newsletter, produced at the factory and similar in general format to the Kiplinger Letter or other familiar newsletters. It is distributed to all members of the managerial group in the plant, both in the shop and in the office. The newsletter, although addressed to management, is not confidential and it is not only permissible but it is expected that every supervisor by one means or another, will pass on to his employees information from this weekly newsletter.

Second is what we call a managerial bulletin. It is analogous to a newspaper "extra." It is intended to be a rumorkiller, to beat the grapevine when possible. It appears at no regular interval. In time of crisis, there might be several in a day. There might not be another bulletin for several weeks. . . .

Third is the letter from the works manager to the homes of all employees. Like the bulletin, such letters appear at no regular intervals. They may deal with non-controversial topics. They may deal with the hottest of controversial topics. They are used whenever it is important that all employees be told the same facts in the same way at the same time, and particularly when it is desirable that not only the employee but his wife or other members of his family have the facts also. . . .

Two kinds of people administer the Information Program. In factories where there is a works public relations manager, the Information Program is one of his main responsibilities. We have now eleven works public relations managers. In the other operations, the program is carried on by an information editor, who devotes full time to it, except in a few of the smallest operations. . . . Most but not all of these people have editorial training or experience. One of our public relations managers is a mechanical engineer. Another is an ordained minister. But our general experience emphasizes that it is easier, cheaper and quicker to hire an editor and teach him about Harvester than it is to take a Harvester man and try to make him into an editor. . . . ***from an article in AM, September, 1950, by Ival L. Willis, vice-President, Industrial Relations, International Harvester Company.***

Engineering Efficiency in Business Economy Means Swift Recognition of the Broad Approach

by George S. Odiorne, and Monroe Berkowitz

Shrewd management men have long foreseen that the era of the pure technician, the absolute theorist, is disappearing under the broad demands of today's business economy. Here is an article telling of the problem confronting modern engineers, in colleges and in industry, and of the task facing today's business firms which need them. In this clear summation of the difference between the narrowly technical engineer and the broader business entity he must become to be successful, the author points up a problem that can be applied increasingly to almost every modern business, as well as to all areas of the management field.

AMERICAN industrial firms need engineers and they need them fast. Surveys by the National Society of Professional Engineers and other groups point to the serious shortage of engineers that will exist for several years. Fortunately, young high school graduates are responding to the lucrative employment opportunities and the general glamor which surrounds the profession. The annual educational census conducted by the president of the University of Cincinnati reveals that almost one-third of the entering college freshmen chose the engineering curriculum this year. Since the gestation period for the engineer extends several years beyond graduation, the immediate problem is the effective utilization of existing engineers.

On the surface the answer would seem to be to divest the engineer of his non-engineering duties and pack more engineering work into each individual engineer. Job dilution has an important role to play in more effective utilization of existing engineering manpower. Certainly many technically-trained engineers spend a disproportionate amount of their time on routine drafting or paper work which could be done by less skilled technical aides. The management engineer might well turn his attention to his technical colleagues and free them from arduous, time-consuming tasks which might be assumed by personnel available in more generous supply.

If such a program of job rationalization were done perfectly, presumably the engineers would be left with pure engineering tasks to perform. Yet strangely enough, engineering work reduced to its purest form still remains a curious alloy of engineering and a mixture of other elements. Engineering work in modern industry does not take place in a vacuum, but rather in an industrial environment whose shape is dictated by economic and political considerations. Today's engineer normally functions as part of a group, wherein the individual works with members of his own profession, other technicians, suppliers, customers, and perhaps business managers. Even the most technically-occupied engineer must constantly communicate with other people. With his own colleagues, something more than technical jargon is necessary if he would make himself understood. When communication breaks down, and he knows nothing or little or nothing about securing the cooperation of others, the purely engineering work suffers just as much as if his calculations of technical engineering data were faulty.

The Engineer Cannot Be Handled As an Industrial Automaton

Especially today the engineer cannot be treated as an automaton. He is not simply a machine into which the company can put problems and get out solutions. The more he advances in technical competence, the more self-assured he becomes professionally; the more he wants to know the reasons for managerial decisions and policies, not only as they affect him, but also as they affect the company generally. If management doesn't explain what is happening, he resents it. If they do explain and he doesn't understand, he feels frustrated. Either way, trouble is brewing which if left to boil will interfere with maximum utilization of scarce engineering manpower.

Take the actual case of the young engineer who works successfully to bring a particular production line up to peak

mechanical efficiency, only to have it shut down by management due to changes in the market demand for the product, or for other business reasons. Legally, management owes him no explanation. He did his job well and received adequate pay for his troubles. If management decided to shut down the line, that was its business. On the other hand, if management is seriously interested in maximizing this man's engineering potential, it will give him an intelligent explanation and get it to him fast. It is true that there exists no contractual obligation to explain these actions to any employee, but since management wants to conserve the engineer's skill and enthusiasm for the next job, it must try to explain its action and to show that such action wasn't mere caprice. The man who feels slightly cheated that "they" shut down "his" line will hardly be as interested or enthusiastic on the next job he tackles.

Engineer Needs Information About Company Activities

Since industry is interested in maximum utilization of existing engineering manpower, mere job rationalization programs are not enough. Engineers must be oriented to understand business management principles, problems, and philosophy, if they are to do a good job as engineers. This proposition allows of attack in a number of different ways. Some managers have claimed that engineers are simply not interested in management or in managerial problems. We would advise them to ask their own engineers. Our experience has been that the engineering staffs are vitally interested.

Recent work by the writers in one engineering company indicates a definite interest on the part of engineers in the problems of management. This study further showed a desire to participate in management decisions, even on the part of those engaged in purely technical engineering work. On the other hand most of the engineers canvassed showed a startling ignorance of basic managerial problems and principles, and even less appreciation of the importance of human relations as a tool of the engineer. The engineer proved to be interested in human relations as it affected him, but gave little thought to using it as a technique in handling the relationships involved in performing his jobs. He tended to resent the fact that his job and the role of the company are vitally dependent upon economic considerations about which he is rather hazy.

More narrowly, he wants information about the company, its plans for the future, its financial position, and changes as they will affect him or his department. He especially wants to know how he is doing. Most acutely, he feels the need for knowing the basis upon which promotion policy is established, and resents any system under which promotions are not awarded fairly to deserving individuals. It proved characteristic of the group surveyed; that while they felt that promotions for engineers should be based upon engineering skill and performance, they gave little thought as to how technical ability and performance at a lower level actually qualified them for higher echelon positions where most of the duties would be administrative and non-technical. It seemed to most of them that administrative skill and leadership ability would come naturally to the technician who had earned his higher post by reason of his technical knowledge. It was a generally-expressed opinion that if given adequate information, he could make adequate management decisions at a higher level than he presently held. That engineers want and need to know about their company's management and business problems can be taken for granted. A more basic problem is how can this best be done, if it can be done at all in any meaningful way.

Expanded Curriculum Burdens Undergraduate Engineers

The logical place to do much of this training would seem to be on the undergraduate level. If engineers need something more than technical training, then presumably the same school which equips them for their vocation should pay attention to management, economics and general education courses. The framers of the engineering curriculum have recognized this problem in the last few years and have attempted to solve it by adding courses to the already overburdened curriculum. A man can absorb only so much in eight semesters, however, and the pressure of industrial demand is for technically trained engineers. This has brought longer hours and more intensive demands upon the intelligence and retentive powers of the nascent engineer in the technical subjects alone. Increased instruction in the business and liberal arts subjects are consequently greeted with something less than enthusiasm.

Some of this time-pressure might be alleviated by extending the undergraduate years to five or even six as some universities have done, but this is not always economically feasible. Industry demands the finished product quickly and young high school graduates are clamoring for admission to the already overcrowded schools. At any rate it is doubtful if the mere mechanical extension of time is going to solve the problem any more than the simple additions of courses to the curriculum. More fundamental difficulties are involved.

Social Sciences, Engineering Present Difficult Contrast

Courses in engineering, liberal arts, or business are essentially intellectual disciplines when taught at the University level. The differences between these fields could easily be over-exaggerated. The outer reaches of knowledge in the fields of vibration and shock, or electronic circuits are fully as unknown as in economic analysis, psychology, or 18th-century drama. Authorities differ fully as much when it comes to the construction of substructures, grillages and piles, as they do in prescribing proper methods of allocating a capital budget, or motivating a work force. Solution to each of these problems requires an accumulated fund of knowledge coupled with vivid imagination and mature judgment.

Yet from the point of view of the undergraduate, courses in engineering and the social sciences are worlds apart. To him, the course work in engineering appears to be definite and precise while the social studies may appear vague and amorphous. He is not totally wrong since the problems he is given to solve, in the course in engineering mechanics for example, are problems for which the instructor has very definite answers. When he turns in his assignment he is told that his proposed solutions are either right or wrong and in this indefinite world one can derive much comfort from this.

On the other hand, in his economics or psychology course, he is asked to grapple with questions which just do not have one precise answer which can be considered totally wrong or entirely right. Authorities may differ since they must assess variables, and weigh factors in light of certain value judgments before they can arrive at a policy decision or a solution. Continued exposure to such material can be very frustrating to the embryonic engineer who is being conditioned by precise and realistic material in the engineering courses. Where

he does encounter precision and rigor in economic, social or political thinking, in theory courses for example, he ofttimes fails to find a close correspondence between the abstract and the real.

Time, Motivation Important Factors at Undergraduate Level

In the absence of some effective catalyst these methods of thinking and study have a difficult time mixing. The disciplines on the undergraduate level are different and in order for the engineering student to derive practical benefit from the social science course, he must have sufficient time and adequate motivation to deal with these courses. Unfortunately, in the usual case, he has neither. His time is budgeted closely and these courses just do not assume, the same importance as the engineering courses, not only in his eyes, but from the point of view of the engineering school and his prospective employer. If he does poorly in his engineering work he will soon find himself looking for an alternative curriculum. It is regrettable but not necessarily fatal if he is not quite up to par in his non-technical courses, be they required or elective. Employers may make speeches about the necessity of hiring well-rounded engineers but how many actually scrutinize carefully an applicants record in non-engineering subjects? In light of this, too many engineers are content to just get by in their outside courses. Most of them are fairly intelligent and soon learn that if all one is looking for is an acceptable mark, a gentleman's grade of C for example, a little knowledge can be spread over a wide area. They recognize that one doesn't really learn very much in this fashion, but they are not quite sure that there is anything in these courses that is actually worthwhile learning anyway. Furthermore if they are so unlike their classmates as to have a genuine interest in the material, they are quite careful to conceal it.

The framers of engineering curricula have intellectually recognized the problem, but emotionally have evaded the basic issue. Reflecting the institutional thinking of the engineering profession, they shun leadership in certain respects in prescribing curricula which would produce a technician capable of adjustment to real conditions. A few educational leaders have established entire programs of study leading to degrees which genuinely combine business and engineering, but in the van the emphasis is upon technical excellence, even at the expense of vitally related courses of social science.

Leading schools giving engineering education have done much to offset this dangerous condition. For example at Massachusetts Institute of Technology not only are some of the country's best engineers and physicists produced, but also some graduates who have studied economics under Samuelson, and management under Bavelas. Less fortunate is the graduate of the smaller engineering college which has neither a strong social science department nor a related cooperating college of Arts and Sciences such as is found at California, Princeton, and Rutgers, to name a few. It is fairly easy to distribute blame and propose solutions for these problems but the usefulness of such exercises is doubtful. Certainly the teacher of the liberal arts or social sciences course is not without fault. Too many of these courses are taught without sufficient rigor; too often the student with the glib tongue is allowed to substitute extensive wordage for particular knowledge. Some courses that the young engineers call "wind tunnel" or "breeze" courses richly deserve the name. Of course we need better teachers and more rigorous intellectual discipline in these courses but this is not going to be the final solution. The problem of the engineering student's limited time and inadequate motivation will still remain as long as the engineering profession and industry generally maintain present attitudes.

Where the Real Training Of Engineers is Done

Given more time and improved facilities the engineering college undoubtedly could do a better job of turning out a finished product better able to fit into the industrial scheme of things. Under existing conditions, especially with the urge to be off the campus and onto the job, the majority of the training of engineers is done in the factory or lab. Here the burden shifts from the educator to the industrialist, and here even more than in the college is the process subject to critical study. The motivation that the student lacks is soon found when he moves from the university to industry where he soon finds that his job requires something more than engineering skills. The problems without definite, known solutions are the principle problems that industry faces. If the engineer wants to know why something is happening in his company, he must know something of the way economists, administrators, and psychologists think. It may be utterly amazing to him that they do not use slide rules to solve their problems. One young engineer, visiting his undergraduate professors, reported his first contact with his superior on his first job. As a new production engineer he thought he saw a method of improving a production process.

"The first question I was asked was, 'How much is it going to cost?'" he reported sheepishly, "and I thought he was being trivial."

Proper Training Can Induce Perspective of Experience

This is a type of ignorance which experience overcomes rather quickly, and for which there is but one other substitute—training. In today's market experience is a valuable commodity, and cannot be purchased cheaply. Wonderful things are stored in the minds of the young engineer, and as he designs a widget for the Jones Manufacturing Company, he pours forth the highest degree of skill he possesses. Frequently it takes some shop foreman or machinist with twenty years experience, using "quick and dirty" methods to make the thing work at all. One company with which the writers are familiar has spent thousands of dollars in training their designers to specify standard hardware and materials in the machines they design instead of some esoteric bit of bric-a-brac from the engineering catalogue.

Most of this money in training has been spent in changing the underlying attitudes of the designers. The missing quality in these designers is not technical lore, of which they have a plentiful supply, but of economic judgment. Reflecting their training as engineers they strive for "sound design" with total disregard for practical application in manufacture and maintenance. The result of this one-sidedness is reflected in products which require special tools to manufacture and repair, resulting in disgruntled users faced with repair bills far to high; wasted materials, and higher costs to manufacture.

Engineers Efficiency Depends Largely on Attitude

Let us look at the pure engineering research function. Here the engineer takes the principles of physics, mathematics, or chemistry and patterns them into devices or processes having practical application. If he is working at the

frontiers of science and technology, his job is to apply imagination and intelligence to devise new combinations which did not exist before. Although the engineer is confronted with this situation constantly, a real loss of efficiency in research comes from the mental attitude with which the fledgling engineer reapproaches each new problem in research. Indoctrinated in college in the belief that engineering is a discipline in which the solutions are all positive, he flinches at first from plunging boldly into the unknown where there are no positive solutions. On the other hand the experienced researcher recognizes this absence of positive knowledge and adjusts to, and even relishes it. Thus, the important difference between the efficient and inefficient engineer is only partly one of accumulated technical knowledge. A major part of the difference between the two is in their attitude toward the objectives and methods of research.

Orientation to Reality is Part of Productive Attitude

This is illustrated by a recent request received by the University Extension Division of Rutgers to provide a special course for a group of research engineers. The content of the proposed course was to be a "how-to" course on the design of a certain electro-mechanical component. Upon inquiry in the industry, it was discovered that the only person having enough knowledge and experience to serve as instructor in such a course was an engineer of the very company which had requested the course! Although these engineers were in effect the brawling giants in this particular part of the frontier, they obviously wished to return to the security of the institutional womb from which they sprung. Once informed that in their own field they were too advanced for their former professors, they returned to their labors with new zest and enthusiasm.

"Unlearning" is Also a Large Education, Experience Factor

These examples are typical of the sizable "unlearning" job which faces industry with each new crop of engineers it recruits from the senior class. The most successful ones are those who "unlearn" quickest, which is to say that new, more practical attitudes replace the narrowly technical thinking of the new engineer. The costly process accelerates when the company fails to recognize that this changing of attitudes is not necessarily one of time and experience, but is subject to positive training and indoctrination of engineers into the more practical aspects of business and economics. In many cases they continue to school him in technical information, patterning their training programs upon graduate schools of engineering. Few, if any, include such subjects as the cost accounting system of the company, purchasing, and related "bread-and-butter" subjects in such training. It is only when conflict and confusion resulting from the schism between "sound engineering" and practical business occurs that the desired change in attitude comes about. This can only be described as doing it the hard way.

The pattern of unlearning previously-held attitudes is more than one of learning new technical skills. Closer study of attitudes, and positive training to channel them along more effective lines can reflect itself in greater engineering efficiency. Although the instances cited here have been limited to the research and design phases of engineering, the implications are as valid for any branch of the science. It poses a basic question of personnel and administrative philosophy for industries having problems revolving about the utilization of manpower.

The implications of the present crisis in engineering manpower are important to the engineering profession, as well as to the industries which employ them. In the sense that his status and function in industry is involved, the engineer has a stake in the methods by which he is inducted and trained in his post-collegiate position. If he is to be turned loose in industry with the expectation that he will learn the realities of modern industrial management by the sink-or-swim method, either one of two alternatives will govern his future. In one case he will learn to cope with administrative and managerial problems of a broad business nature by himself, or as an alternative, he will never rise beyond that position which calls for narrow technical skills and knowledge. In the latter instance, industry will be the loser, in that the vast pool of potential executives which is represented by the engineers will fail to be realized.

Broader Education, In-Plant Training is the Answer

Recognizing the reluctance of many managements to spend ready cash for long-deferred benefits, it might be germane to accentuate the immediate benefits of first, broader education, and second, the training of engineers on an in-plant or in-service basis. A few of these we have pointed out as having the effect of actually increasing the engineering efficiency of the engineer in his purely technical work. These also, we believe, are only part of benefits which can accrue to the engineering firm, or company employing engineers, through training them in the realities of industrial and business principles. END

The Past Work Of The Engineering Profession . . .

It is said that historians had expected to find in the Nile remains which would reveal a gradual evolution from a neolithic culture to civilized life. On the contrary this change appears to have taken place almost overnight. The transition from the earliest cut-stone masonry to the greatest mass of cut-stone man has ever put together, the Great Pyramid, took but 150 years—a mere tick of the clock of time. In this same period a purely agricultural way of life was supplemented with an interchange of manufactures; the first Industrial Revolution took place. The rapidity of development in the Pyramid Age in ancient Egypt, roughly 3000 to 2500 B.C. and the Golden Age of her long history, has no parallel in human records until our own times. . . .

—James K. Finch, The Evolution of the Engineering Profession, in Centennial of Engineering, P. 122.

Consultive Supervision From Chairman to Foreman

by C. W. Cook

In this case history report from an executive of a company which takes a 'dim view of one-man shows' there is frank discussion of techniques for encouraging productivity increase and brief exposition of management philosophy which puts emphasis on human dignity

LEADERSHIP means many things to many people. Too often the terms "leadership", "management" and "supervision" are interpreted to mean only the directing of others, especially in the lower levels of supervisory organization charts. This concept overlooks or ignores the generally accepted adage that goes: "The best method for getting an individual or group of individuals to do something is to cause him, or them, to want to do that something." I think that adage is particularly appropriate with respect to Americans, with our heritage of personal freedom.

We all spend much time, money and energy having engineers and other specialists study our processes, layouts, materials used, and methods in the interest of effective operation. Many of us emphasize work simplification and better training in our efforts to gain maximum output per person. In some instances, we in industry use financial incentives — bonus plans, piece rates, etc. — to encourage the individual to "put out" all he can or will. All this effort is to be commended as it demonstrates many phases of good leadership or management at work.

However, these management tools can be, and should be, complemented with a healthy motivation on the "*want* to do" attitude on the part of individuals. The combination of the proper know-how, the proper facilities, and the desire to do is hard to beat.

How do we bring about that "desire to do" attitude? How do we develop loyalty, cooperation, sincere interest, willingness to contribute that "extra bit" that often means so much? It may seem that the obvious answer includes good pay, liberal benefit plans, good working conditions, steady employment, interesting work, chance for advancement, and fair treatment. I agree those points are very important, and probably necessary. Observance of those points should insure good results—by usual standards.

Many studies over many years indicate that the average individual's performance — or output — is from 50 to 75% at best, of what is considered a reasonable standard as to what a person should do for a given period of time. The most authoritative figure I find is 60%. This refers to work that is not machine-paced or subject to incentive earnings. It would be interesting to know what the comparable figure would be for first and second line supervision —or even for the "V.P." level.

How then can we induce individuals to close or even partially close, that big gap between 60% actual performance and the 100% that is possible? In General Foods, we believe that an important step in that direction involves a greater feeling of participation on the part of every employee, regardless of his level in the organization. It is undeniable that the typical individual will give more if he feels that he is "in the act"; that he is truly a member of the team rather than a cog in the individual machine.

Is this a philosophy or a technique? It is a very basic philosophy in our company, though of course, techniques must be used to implement that philosophy. Our principles of personnel administration and employee relations have been put in writing as a formal declaration of policy in a modest little booklet we proudly refer to as "The Little Yellow Book"—, and since 1941 the first item under Administration has read as follows:

What Supervision Produces Best Results?

"CONSULTATIVE SUPERVISION — Because it places emphasis upon respect for the personality and human dignity of each individual employee and allows maximum development of his natural capacity, the management believes that the most enduring—and in the long run

the most satisfactory—personnel relations will be attained by means of consultation and explanation—up and down the organization—through the channels of communication shown on organization charts . . ."

That we believe; we are committed to it, and we do our best to carry it out!

Consultative Supervision: A Two-fold Approach

There have been many good definitions for the phrase or term "Consultative Supervision". Our concept involves two related approaches to our employees:

A. Ask for, discuss and sincerely consider the views of employees before reaching decisions materially affecting their jobs and interests; and

B. Tell them what is going on, and why, particularly on matters affecting employee relations and their jobs.

Now, what techniques are employed to carry out this philosophy? We are considering an *attitude*, an *approach*, rather than a specific procedure. We do not say, "Let's emphasize 'consultative supervision' from nine to eleven each Tuesday morning, or even in each of our meetings". Instead, we do say, "Discuss problems with your subordinates in groups and in informal on-the-job conversations with individuals; describe the difficulties, outline possible solutions, and ask for ideas or comments, and do this regularly!"

Let me describe a few case examples which I believe will be more meaningful than mere generalities. I have chosen these particular ones because they cover a variety of situations and job levels, and because I am entirely familiar with each case.

Example 1: Almost five years ago, General Foods decided to take the big step of decentralizing its operations so as to form seventeen separate, integrated divisions. This move greatly affected the heretofore centralized manufacturing department, especially the division manufacturing managers, of which I was one.

The first plan was for the three division managers to remain in the central Manufacturing Department, serving in a staff or advisory capacity. The factories would report directly to the appropriate general manager, there being no production manager on each general manager's staff.

Some of us felt that this arrangement was not the best one, and felt free to say so. The result was a meeting of the Chairman of the Board, the President, the Vice-President of Manufacturing, the Vice-President for Personnel Administration, and a different solution was worked out.

Example 2: A foreman and his boss, the department head, agreed that a certain employee should be discharged. The union steward disagreed and this led to a meeting with the plant manager, personnel manager, department head, the foreman, and the union steward present.

There seemed to be good arguments on each side. Instead of making the final decision himself (which he was empowered to do under the grievance procedure) the plant manager proposed that the seven foremen in that department decide the matter. The union steward agreed, the other six foremen were assembled, and the steward again outlined his point of view. The plant manager, together with the union steward, the personnel manager, and the department head then left the room after assuring all that the discussion of the seven foremen would have his "blessing".

The seven foremen voted six to one to lay off the subject employee for two weeks and give him a final warning in writing.

Example 3: The Company decided over three years ago to discontinue operations at the Los Angeles plant, and build a new plant in the San Francisco Bay area. Property was purchased in the latter location, but the timing on actual construction was not known.

Employees Were Fully Informed Of All Steps

Even so, the employees of the Los Angeles unit were informed of the property acquisition and were promised they would be kept informed. When the engineering work was completed, the employees were told almost a year in advance of the actual moving schedule. All employees were invited to make the move at the Company's expense, but an alternate program—with termination allowances, help in finding other work, etc.—was worked out for those who chose not to transfer.

A competent supervisor was given the sole assignment of counseling with employees to aid them in reaching decisions as to whether to move with us, or not; and getting information on the new locality as to climate, housing, schools, churches, cost of living, etc. He also helped to place those who chose to remain in Los Angeles.

The result was that 40% of the hourly-rated personnel, and practically all of the salaried personnel, elected to move the 450 miles with us.

In our organization of some 19,000 employees, there are probably between 1,500 and 2,000 supervisory people. They do not bat 1000 on this phase of their assigned responsibilities, just as they do not bat 1000 on accident prevention, production scheduling, spoilage reduction, or on the many other facets of their jobs. We like to feel that the overall batting average is pretty high, and we are constantly trying to improve the weak hitters on the team.

Management Believes In, Explains The System

Those of us in management talk and write much about this wonderful business system of ours because we believe it. Many companies—including General Foods—are spending a lot of time and money trying to explain more about this system to our employees in a program called Economic Education. Even though the average working man benefits from our American business system, to a degree unequalled throughout the other countries on this earth, seldom do you hear his voice raised in praise of that system. Don't write that off to ignorance or reticence. I am convinced that at least part of the reason is that he does not feel he is truly a part of it.

I submit that the exercise of consultative supervision in industry is an important step in making the operator at his machine, the office worker at her typewriter, the salesman with his order pad, the mechanic with his tools, feel that he belongs. END

WHEN employees have achieved a reasonable degree of security they will feel the need for the realization of self. The workers of today are better informed about company policies, economic problems, and other matters related to production, than at any time in the history of our country. Thus, they are in a better position to participate in discussions of changes, policies, and other matters which affect their lives.—*J. Stanley Gray, Psychology in Industry.*

Communications: What Are Employees Really Interested In?

by Peter F. Drucker

Are employees really interested in the things employers assume they are? This vital link in the chain of communications undergoes a penetrating and scientific appraisal. A course is charted toward the essential prerequisite for any program

It is not only because I am not a technician that I shall not today talk about techniques. Techniques are important. But it seems to me that the basic problems in communications today are not technical problems and cannot be solved by technical means. I believe that we have to think through the fundamentals—and I believe above all that what is wrong with communications is precisely that we have not done so but have rushed into techniques before we knew what we were doing or why. Specifically I wonder whether we really know at what we are aiming, whether we have thought through our assumptions and above all whether we really know what we mean when we say "communications." The target of communications, the basic assumptions underlying our present efforts and the concept of communications itself all seem to me to be open to serious questioning.

Last summer I watched a young plumber put in an electric pump in a farmhouse up in New England. The young man had never before done such a job and relied exclusively on the manufacturer's instructions which were very poor instructions indeed: badly printed, almost incomprehensible in spots, with blurred and confusing drawings, etc. It took the young man quite a while to get through the instructions—he had to read them again and again. In addition at several points he felt very definitely that the instructions were wrong. Yet he not only took the trouble to study the instructions till he understood them; he followed them even where he thought that they surely could not be right. When he was finally finished and when the pump ran much to his surprise—he turned to me with a broad grin and said: "Guess they know their business."

A Different Attitude Exists In Other Areas

Can you imagine a similar attitude in respect to what we normally call "management communications": a company's annual report, a letter from the president, "economic education" and all the other stuff that pours out from our managements today? What is the difference between the attitude of my plumber-friend up in New Hampshire and the typical attitude of our employees—and that incidentally would include the young plumber I am sure—regarding "management communications"? In respect to technical information regarding its product, its processes, its tools and its techniques management obviously has no communications problem whatsoever. It is looked to, listened to and followed. Yet from the point of view of communications techniques—the area on which we have been putting so much emphasis—these technical areas are actually extremely difficult. In fact the technical problems in these areas cannot be solved satisfactorily.

I submit that the difference is simply that the people as a whole including our employees accept management as both competent and authorized in the technical area. They consider management to have legitimate authority in these areas. And, like my friend the plumber in New Hampshire, they feel that "management knows its job" in these areas. Therefore they are not only willing to listen; they are willing to work hard to understand what management is saying. There is no resistance to management's message. There is receptivity. For there is the conviction that management is rightfully an authority in these areas and that management is competent in these areas.

In the areas in which we are interested: in the economic, political and business areas, it is only too obvious that management does not enjoy such standing today—in fact it is obvious that management never has enjoyed such standing. It is quite clear that a great many people, people incidentally who are in full agreement with the things management says, do not feel that management has any legitimate authority in these areas. Even less general is the conviction that management has competence in these areas. This would lead me to conclude that there cannot be receptivity in these areas. For nobody listens to somebody who neither has competence nor authority for him.

I would therefore first raise the question whether there is any point in going after the objectives which so many communications programs today seem to aim at: "employee education," "employee information," "changing the thinking of the employee"—let alone such queer targets as to elect a Republican Congress or to get a lower tax load on business. I am not quarreling with any of the objectives themselves. But I am wondering whether we can hope to reach any of them or whether all the money and effort we spend today is totally wasted unless we concentrate first on establishing management's authority and management's competence in these areas. Unless we convince the employee and the public that management has a right to speak in these areas and that management has something worthwhile to say in these areas, we will not, I believe, make any headway toward the more ambitious goals such as "changing the employee's thinking" or "educating the employee." To my mind this means that the first and major objective of a communications program cannot be to "get anything across" but to establish respect and receptivity for management.

Two Assumptions of Present-day Programs

This leads me to the question of our assumptions. When I look at management's communications programs today, especially at those directed at the employee, they seem to me to be based on two assumptions: the first one is that the listener, whether he be employee or general public, considers the same things to be important and relevant that management considers important and relevant. In fact the assumption is general that the listener is interested in these things: profits, prices, wages, efficiency, free enterprise, etc. The second assumption seems to be that the listeners, or a fairly large number among them, are hostile to the American free enterprise system and are at least slightly infected by collectivist doctrines.

I submit that there is absolutely no basis for either assumption.

We cannot assume that the listener is interested in business or economic facts or business or economic theories. We can assume, on the basis of our research, that the average employee is quite interested in the immediate happenings in his own company, particularly those that affect his own work and his own job. But that is all we can assume. Specifically we cannot assume that the individual employee or the individual member of the public sees things the way management does.

But we also must not assume that the things that are important to management are important and relevant to him. Frankly I am very unhappy over the basis on which so much of our present communications effort is carried out. The basis seems to be a conviction that this is what the people, the employees, the stockholders, the public, are interested in. This is simply not true. The people who are interested in this—and for very good reasons—are the management. If we only were to admit to ourselves for instance that a knowledge and understanding of the economic facts of life is necessary from the point of view of management — and from no other point of view—I think we would be on very much firmer ground than we are today.

It is I think this misunderstanding that underlies our assumption which also explains the queer belief that we deal with people deeply infected by collectivist ideas who have to be "cured." I think anybody who has had any contact with the American worker knows that this is utter nonsense. There are no collectivists among them. To assume, as so much of the more blatant management propaganda does, particularly in the economic field, that the American worker suffers from either ignorance or delusions is just to abandon in advance all hope for effectiveness. And yet, if you look at the stuff management puts out—let alone the stuff management organizations such as the NAM or the Advertising Council put out—you would find that eighty percent of it or so is somehow based on this assumption that we have to "reform" the American public.

But the area where I am most dubious is that of the concept of "communications." When people talk about "communications" today they seem to mean by that the formal communications media such as company magazines, annual reports to employees, company letters and company advertisements, etc. Actually I sometimes wonder whether these things have any importance. Certainly they have only a very subordinate role.

Communications is simply a phase of employee relations. And we know that employee relations are being made whenever company and employee have any contact, that is primarily on the job and in the work. Similarly communications take place every time the employee and the company are in contact, that is every moment of the job and work period. Formal communications are necessary to formulate and bring out communication that has actually taken place in the day to day relationship between man and boss and man and company.

Real Communication is Day-to-day Contact

I submit that we are not today considering the real communications. We deal with the minor things on the periphery. If we are really concerned about communications we should look at our day to day policies and our day to day practices. Do they get across to the employee the things that we believe the employee ought to get?

It is at this point that my own interest in communications actually begins. But I shall not today go into these matters. I would only like to say today that I would start an analysis of the concrete communications of your own company not with your formal communications program—in fact I would not pay much attention to it. I would start with such questions as: do you have a union relations policy that is likely to get across to the individual employee an understanding of the economic facts of life and a conviction that he has a stake in the free enterprise system and in the prosperity of his own company? I would raise the question whether in your day to day policies and practices on the job you get across to the employee the things which your formal communications system wants to get across to him. Above all I would raise the question whether your policies, inside the company, outside the company, in relation to labor, etc., create that respect for management and that acceptance of its authority and competence which is to my mind the very first prerequisite for any communications whatsoever. END

Personnel is an Executive Function

by W. G. Caples

Profit records are reflected in the best utilization of manpower. Executives are finding it necessary to give an increasing proportion of their attention to personnel problems

EXECUTIVE function, the coordination of activities of others, has been present in business from the time more than one person engaged in any common enterprise. However, emphasis on the personnel aspects of that function has changed considerably in the last 50 years.

The executive at the beginning of this century was concerned primarily with the building of new businesses and the acquisition of the material things necessary to their success. The executive was concerned with the acquisition of land and raw materials, sinking mines, building ships, plants and factories. The executive was primarily concerned with technology, machines, methods and processes. He was concerned solely with the production of quality goods in quantity at low costs. Men were relatively unimportant. Business as a social institution was unheard of.

It is astounding when we consider the progress made in this country since 1900; the greatness and accuracy of the imagination of the executives in the United States at the turn of the century. They dreamed great dreams, took large gambles and received great rewards. Their ideas were fresh, new concepts free from European ideas. They built an integrated steel industry, where integration was purely an American idea conceived by American executives. It was an idea to be adopted by other industries. Their concept of an industrial machine was brought into being. It is the greatest in the world, great enough to win two world wars.

We cannot discount what these men did.

The executive today in contrast cannot confine his efforts to building and control of cost, quantity and quality. He has the burden of handling the human relations within his business or personnel as it is generally called.

Today, the plan of organization, that is, the duties and responsibilities of each person within an organization who has management responsibility and his function must be determined by the Executive. He must determine those who have line authority, or, as they would say in the Army, those within the chain of command or who have command function. In addition to those who are directly responsible for the operation of the business, the executive must organize the various staff departments of a business.

The operation of any industry of any size has become so complex that there must be available to those in line authority specialists who can advise them and aid them in their work. These people are primarily technicians; they have no line authority or command and can merely suggest and advise those who do have such authority. Examples are engineers, industrial engineers, personnel experts, labor relations experts, research men, business procedure experts, psychologists, safety engineers, Doctors of Medicine, etc.

After Organizing, What Is Next Step?

The executive once having determined a proper scheme of organization is charged with the duty of seeing that those who fill each job within the organization are fitted for it. This does not mean that an executive may rest when those presently working are competent nor can he consider them permanent. Industrial life is never static. There as always natural attrition through death, disease and those leaving who believe there is greater opportunity elsewhere or whom the management believes have greater opportunity elsewhere. This means that the executive must plan on the growth of those within his own organization and bring new people into the organization for replacement. One of the neatest tricks is to se-

lect men today for executive responsibility 20 or 25 years from today.

The executive must determine methods of communication within the organization between those under his supervision and those who supervise him. These fall into two classes: those of formal communication; in other words, the preparation of the reports necessary to keep all fully informed and to enable them to make sound decisions. There is also information communicated through personal contact, reports of committee meetings, etc., which give opportunity to feel the pulse of the organization.

Cost Is Always A Prime Responsibility

Cost is always a prime responsibility of any executive, and wages and salaries are usually the largest item of cost in any business. Therefore, it falls on the executive to determine what are proper rates of pay for work performed, that the relation of reward to each is commensurate with the effort and skill of the individual. There are many methods that have been developed which determine methods of wage and salary evaluation and control. However, in the final analysis it becomes a matter of judgment. It is this judgment which must be exercised at all times if costs are to be properly controlled and morale is to be properly kept up.

The executive in addition to controlling costs and to keeping close attention to wages and salaries, must pay strict attention to the control of methods and manpower. Probably no cost leak is more expensive than inefficient use of manpower. Needless to say, the use of men in minimum numbers with minimum motion and fatigue by the individual gives the maximum use of manpower. It is rarely, if ever, that this ultimate is achieved and it is, therefore, necessary to carry on a constant study of methods and processes with a hope of always using without wasting manpower.

All of these personnel duties of an executive are facets of an enterprise. However, the philosophy of a business, its reason for being is probably more important than any of them. It is the executive's jobs to formulate such a philosophy and to make sure that it is sound; that the purpose and objectives are such that the enterprise will live in a competitive world and benefit all connected with it, worker, owner, customer.

Today, where the machines and processes are available to all, the difference in competition is how well or how badly people handle their manpower. The new area of competition lies in the effective use of people. Between most companies today there are few secrets of machinery or processes that remain secret very long. When a competitor buys a new and better machine, we soon learn of it through trade channels and from the manufacturer's salesman who wants to sell us the new machine, too. We all pay approximately the same for our raw materials as do our competitors because those prices are determined by a free market. But when it comes to costs of manpower we can gain a cost advantage over our competitors if we are smart enough. One way to do it is through proper wage methods which produce incentive. Our machines may roll steel at the same number of feet per minute as those of our competitors, but if we can do a better job of convincing our workmen (through proper incentive) to run and repair the machines so that we have less waiting time for materials and for repairs, we will get greater production out of the same machines than our competitors. Men's attitudes toward their work as well as the money incentives can make tremendous differences in the quantity and quality of the product coming out of their machines. It is a function of the executive today to place his company in the best possible competitive position costwise through providing the best possible climate of "willingness to produce" among the men who operate the machines.

Creation, Maintaining Willingness To Work

Now creating and maintaining "willingness to produce" by the men in the workforce is a difficult thing. It calls for the highest degree of executive skill in establishing and practicing good personnel policy. It calls for overcoming a hostility toward "bosses" which has been developed over many generations and which has been and is carefully nurtured by some union leaders. It is probably the most difficult job any executive faces today—and one which has great profit rewards for the successful executive. Fortunately, the creation of "willingness to produce" among the men in the workforce aids them, too, by providing higher pay and higher ability of the Company to pay — and by providing greater job security through greater competitive strength.

Other Important Functions Of the Executive

But creating a "willingness to produce" in the workforce isn't all the executive can do to strengthen his company and improve his profit record. Tremendous amounts of money are siphoned out of profits by the costs of items such as "turnover." Many figures have been quoted, but taking a very conservative position, we believe that it costs in the neighborhood of $125 to turn over a common laborer. Most of that cost arises because the new man doesn't know "where things are" and you have to pay the wages of the man who takes time out from other work to go along with him until he learns his way around. Well, when you stop to think of the thousands of men who don't stick on the job for long, it adds up to a terrific price to pay to provide men with information and training which neither they nor you can get any value out of when they leave you in 60 to 90 days, or less.

Certainly control of such costs as turnover is an executive function—and one which can pay off handsomely in profits. Reducing turnover costs is relatively simple. You reduce "training and indoctrination" costs by more efficient procedures. And you reduce your turnover rate by better selection methods. A considerable portion of the "floaters" and men who are unlikely to stay 90 days can be identified and eliminated before they are hired. It is certainly an executive function to save such costs.

What has been said can be summarized thus: Anything which reduces costs, increases profits and strengthens a Company's competitive position is a function of the executive of the business. Personnel policy set and personnel practices adopted by executives at all levels within an organization can have a significant effect (either good or bad) on the competitive health and profitability of the enterprise—possibly its survival. END

MUCH of the misunderstanding between management and labor is based upon what might be termed faulty concepts regarding each other. . . . There is a very real need for workers and management to understand each other better.—*J. Stanley Gray, Psychology in Industry*

Scientific Management Applied to The Field of Human Relations

by John T. Diebold

How far has scientific management come since Frederick W. Taylor first formulated its principles? Are existing principles of scientific management adequate or useful for solving today's management problems? This author makes a serious appeal for a revaluation of Taylor's work and a rediscovery of management as an art based on an enlightened application of the scientific method

THE scientific, or Frederick Taylor, school of management is in bad repute these days. The principles and rules which earlier in the century marked the beginning of the management movement today appear to many, in the light of our present knowledge of human relations, as a hopelessly inadequate guide to organization and management. The situation is in fact such that I think it little more than a clarifying exaggeration to say that scientific management is at best beginning to be excused as a period-piece—a product of an age when engineering and physical science were the alpha and omega of industrial achievement, and when the profession of management was in its infancy. At worst it is now represented as a system which invites the most dreadful form of machine society —complete with humans (looking rather like Chaplin) who try desperately to keep up with the machinery but inevitably fall in the gears.

All this is not entirely surprising. Scientific management has many serious faults, both theoretical and practical. But I believe that when one overcomes the present prejudice that would have us abandon serious study of Taylorism, one can find much in Taylor's principles and in the history of their operation which can be of use today. Our present knowledge of human relations should in fact be able to help us in using much of scientific management very effectively. I think that one is quite likely to end such a study with the feeling that in our determination to rid ourselves of the murky waters that surround the first quarter century of the management movement that we have perhaps thrown a baby out with the bath, and that the child is really quite a worthwhile addition to the family of management.

The Discontent With Taylor's System

Discontent with Taylor's system has been widespread on both the theoretical and operational levels. Frederick Taylor's emphasis upon the individual laborer directed attention away from the informal group relations of workers which are today regarded as the key to the understanding of organization. Thus management theoreticians find serious fault with the very roots of his system. But this is more in the nature of rationalization for the fall of scientific management did not begin on the theoretical level. The most widespread dissatisfaction with scientific management has come from another and more easily discernible source—the repeated and often spectacular failures in actual practice of innovations widely heralded as scientific management. In point of fact, however, when one looks more closely into the causes of these failures one finds a surprising phenomena. The failures occur almost constantly in the area of labor relations, and in case after case one finds that the tools which Taylor fashioned, tools such as time study, are being used quite apart from, and without any understanding of, Taylor's broader concepts. And although they are merely tools dismembered from the philosophy which is necessary to guide them in proper use, they are nevertheless labeled scientific management. There seems good reason to believe that confusion of mechanisms with substance—

this use of Taylor's tools quite contrary to Taylor's philosophy—has caused scientific management to fall into as much disfavor as it has. For the countless cases of unfair and unwise use of Taylor's tools that have been labeled scientific management have blackened the name of a body of management principles which actually appears to have been given very little chance to demonstrate its effectiveness in practice at any time since the death of Frederick Taylor himself.

But why has this state of affairs persisted? Why have Taylor's concepts not been tried? Again we need not look far for the answer. On the operating level of practical management, labor relations is too dangerous an area to take many chances, and very few failures are needed to undo even the fairest reputation. Each generation of managers is less inclined than the former to toy with scientific management, for the name itself, if it can be attached to management innovations, can cause labor trouble. On the theoretical level the weakness in Taylor's approach, the lack of attention to the role of the informal group, has shunted many away from serious consideration of scientific management. For as in the case of any new insight, preoccupation with the new concept pushes all else into the background for a time —even that which although not enlightened with the new knowledge could contribute to it. And a generation fascinated by the discovery of the importance of informal groups sees little rewarding in the study of earlier efforts which centered on the individual. Indeed, the management impact of these new realizations has been such that it is now rather like being in the right club to belong to the human relations movement, and all too frequently the specialized vocabulary that has arisen is mistaken for substance, and those who do not use the proper words are deemed not to possess the understanding and insight into human relations for which the words, as symbols, stand. Scientific management is thus thoroughly discredited, both on the theoretical and on the operating, or practical, level.

Have Workers Changed Since Taylor's Time?

Yet we rarely stop to ask just why Frederick Taylor's system did work when applied by Taylor—for work it did, and very well indeed. Or if we do bother to ask we are quick to write it off as a product of an age when workers were very different people than they are today, and when one did not have to consider them as individuals. But can we really brush it off so lightly? Certainly the changes in labor outlook during the past fifty years are obvious, indeed they are *the* fact which we see, and it is thus easy to pass off with a shrug any question as to why Taylor's system was successful. But for all its obviousness, is this the real answer? Are people really that different? Or is there something in Taylor's personal use of his principles and rules from which we can still learn? Is it not possible that for all his stress of the individual rather than the group, that in his actual dealings with people in the use of his system, there is something of value for us to recover?

Certainly scientific management has been given a black name by many ill planned, and even more shabbily executed time studies and schemes for compensation. Labor has often borne the brunt of these "scientific attempts at deception" and understandably balks at any further experiments which use the same tools or jargon. "After the workman has had the price per piece of work he is doing lowered two or three times as a result of his having worked harder and increased his output, he is likely entirely to lose sight of his employer's side of the case and become imbued with a grim determination to have no more cuts." But does the unfair or unwise abuse of a system mean that the system is unworkable? I think not.

Taylor Is Often Blamed For Others' Mistakes

I have no intention of starting a back to Taylor movement. What I hope to do is merely to say that which those who knew Taylor, and those who have worked carefully and honestly with his tools, will feel it needless to say—that Frederick Taylor had a very high level of insight into the human values and interrelations in industrial organizations as well as a keen, indeed brilliant grasp of mechanical methods. Yet I think that this is a fact which is today so often overlooked that a note such as this is needed to recall it all to mind. It is my belief that to a great extent Taylor and his colleagues have been blamed for the bad results that others have obtained by using the tools of scientific management without an adequate understanding of the principles of the Taylor approach. Taylor foresaw that this would happen, and his warning reveals much of his understanding of human nature. "The mechanism of management must not be mistaken for its essence, or underlying philosophy. Precisely the same mechanism will in one case produce disastrous results and in another the most beneficial. The same mechanism which will produce the finest results when made to serve the underlying principles of scientific management, will lead to failure and disaster if accompanied by the wrong spirit in those who are using it." In exploring this phenomena a bit, one begins to understand why the record of scientific management has been so spotty —why it has worked so well for Taylor and some of his colleagues, but why it has since caused so much strife, or simply seemed so very inadequate as a system of management.

Much Good Remains In Taylor's Methods

I think that in looking into what it was that Frederick Taylor meant by scientific management, rather than what we today so readily assume to be scientific management, that we learn that there is a baby in the wash after all—that scientific management for Frederick Taylor consisted of much more than time study. And I think that we will find that there is still much of great usefulness in scientific management which has heretofore been neglected, providing only that we can overcome the prejudice which arises whenever the words "scientific management" are spoken.

Taylor once quoted a very interesting example of the dire effects that can result from the bland assumption that the tools of scientific management are the essence of the system. I think that it is worth relating here, for not only is it typical of what has so often happened, but in the telling of it Taylor reveals much of his own philosophy. "The men who had charge of the work did not take the time and trouble required to train functional foremen, or teachers, who were fitted gradually to lead and educate the workmen. They attempted, through the old-style foremen, armed with his new weapon (accurate time study) to drive the workmen, against their wishes, and without much increase in pay, to work much harder, instead of gradually teaching and leading them toward new methods, and convincing them through object lessons that task management (scientific management) means for them somewhat harder work, but also far greater prosperity. The result of all this disregard of fundamental prin-

ciples was a series of strikes, followed by the downfall of the men who attempted to make the change, and by a return to conditions throughout the establishment far worse than those which existed before the effort was made."

Perhaps the greatest misconception which we have about scientific management is that the system was completely mechanical, that it consisted entirely of time study—the timing of a job, the restructuring of it, and even the redesign of the tools. Now, although it is quite true that this was a very important part of Taylor's system, scientific management by no means stopped here. Frederick Taylor refused to accept the use of traditional tools in traditional ways. He and his colleagues spent years in research, examining the job, determining what was to be accomplished, and then designing tools and methods to accomplish the task—all based on carefully assembled data on the physical characteristics and capacities of both humans and materials. But this was a starting point for scientific management, not the end of the job. Taylor was not so obsessed with the tools he created that he felt them to be the center of his system. He was thoroughly cognizant of the central role which worker attitude plays. While listing reasons why industrial endeavors do not produce the maximum product which theoretically could be expected Taylor assigned first place to "the fallacy, which has from time immemorial been almost universal among workmen, that a material increase in the output of each man or each machine in the trade would result in the end in throwing a large number of men out of work." Further reasons were, defective systems of management, and rule of thumb methods—the things for which he is remembered. But the first reason clearly indicates a realization of precisely those factors which scientific management is criticized for having neglected. But if this is so, why has scientific management acquired a reputation which seems to invite just such criticism?

Importance Of Worker Attitude Often Neglected

The answer would seem to be that mere realization of the importance of worker attitude is not enough, that although Taylor recognized the importance of this factor he did not form his system in such a way as to place effective emphasis upon it. This perhaps explains the ease with which those who have tried to apply the rules laid down by Taylor have become fascinated by the tools and have neglected what must have seemed very ordinary—the primary attention that must be given to the people who use the tools. But in a way the temper of the times was partly to blame, for stop watches and measuring sticks are easily identified as "scientific", and the industry of the day was thoroughly devoted to science as the newest path of promise. Unless the human side of scientific management could have been dressed in very exotic clothes it would have been hard to have had its importance recognized. Unfortunately Taylor did something less than this. By placing emphasis upon the individual he not only delegated the human factors to a back seat—for allowing freedom for the individual to develop to the extent of his potentialities was after all the accepted philosophy, if not the practice, of the day—but he introduced a real weakness into his system.

Taylor Stressed Individual Importance

"In dealing with workmen under this type of management, it is an inflexible rule to talk to and deal with only one man at a time, since each workman has his own special abilities and limitations, and since we are not dealing with men in masses, but are trying to develop each individual man to his highest state of efficiency and prosperity." If one reads such a statement today he is very unlikely to attribute it to Frederick Taylor. Taylor is simply not remembered for such statements. In fact, if one is accustomed to working within the matrix of group relations such emphasis upon the individual might well be regarded as perhaps the next step in human relations work. But if one does not think in terms of informal relations of people on a job, such stress of the importance of the individual can mean a very different thing. It can then take attention away from these informal relations and even delay the realization of their importance. This unfortunately seems to be what scientific management has done. And I feel that here we hit upon the central weakness of Taylor's entire conceptual scheme.

Yet even here I wonder if we do not underestimate Frederick Taylor. For I think that in his writings and in the records of his actions there is much to indicate that he was really a first-rate practitioner of human relations. I think that this is clearly shown in his comments on the importance of the time factor in installing his innovations. "The physical changes which are needed, the actual time study which has to be made, the standardization of all implements connected with the work, the necessity for individually studying each machine and placing it in perfect order, all take time, but the faster these elements of the work are studied and improved, the better for the undertaking. On the other hand, the really great problem involved in a change from the management of 'initiative and incentive' to scientific management consists in a complete revolution in the mental attitude and habits of those engaged in the management as well as of the workmen. And this change can be brought about only gradually and through the presentation of many object-lessons to the workmen, which together with the teaching which he receives, thoroughly convince him of the superiority of the new over the old way of doing the work. This change in the mental attitude of the workman imperatively demands time. It is impossible to hurry it beyond a certain speed. The writers has over and over again warned those who contemplated making this change that it was a matter, even in a simple establishment, of from two to three years, and that in some cases it requires from four to five years." I think that in this passage Frederick Taylor displays a level of understanding of human relations for which he is rarely given credit.

Can We Use What We Have Learned Since Taylor?

We have, since Taylor's day, learned much of human understanding and organization. Can this not provide the understanding which has been lacking in so many of the abortive attempts at using scientific management? "Scientific management . . . has for its very foundations the firm conviction that . . . prosperity for the employer cannot exist through a long term of years unless it is accompanied by prosperity for the employee, and vice versa . . ." Have not the great advances in recent years placed us in a position to now use more effectively the concepts and tools of scientific management? END

All quotations are from THE PRINCIPLES OF SCIENTIFIC MANAGEMENT by Frederick Winslow Taylor; Harper & Brothers; New York (1916).

AM Economics Review . . .

Economic Understanding: A Must For Management

A brief examination of any daily newspaper is all that is necessary to remind us that economic issues are among the most persistent questions of our time.

All of these issues, however important at the moment, are overshadowed by a single dominant consideration: the fact of intense and bitter conflict between the eastern and western powers which threatens the peace of the world. This conflict, essentially ideological in character, is based upon opposite conceptions of social and economic organization and widely different views of the relation of the individual to the state. The Communist world, with its authoritarian organization of economic resources, has long predicted the collapse of the "planless" American economy, and no doubt would be jubilant at the prospect of such collapse. In the United States, this east-west conflict is of such importance that we have made it the central theme of our foreign policy and are spending a considerable share of our resources in furthering various aspects of the cold war.

Out of this ideological warfare has come a fresh awareness of the need for greater understanding of the spirit and functioning of the American economy. There are many evidences of our concern for those values and institutions associated with the American economy which we have long taken for granted. There is a growing conviction that resort to the cliché or shibboleth is simply inadequate in the battle of ideas, and that intelligent and continuing inquiry is therefore necessary. Unfortunately, the need for economic literacy is very great indeed.

Relatively few Americans have undertaken, either as students or adults, a systematic study of the economic processes of production, exchange, and consumption, and those institutions through which these processes are accomplished.

It is not surprising that there is much more feeling than thinking about economic issues. We have tended to adopt the economic opinions which happen to be current in the groups to which we belong. It is, of course, easier for the trade unionist to label the Taft-Hartley Act a slave labor law than to attempt an analysis of it. It is simpler to talk about free enterprise than to attempt an examination of the market mechanism in the American economy. As Lemuel R. Boulware, vice-President of General Electric, recently put it, "too many of us can only fume and sputter when trying to explain the economically and socially useful function of free competitive capitalism."

One of the dangers of economic illiteracy is the tendency to take sides and to resort to name-calling as a substitute for intelligent analysis. It is easy to mistake the apparent for the real, to conclude that a single tree constitutes the whole forest. It is easy to adopt the line of a particular pressure group and to think in terms of the part rather than the whole. To think in terms of the whole economy and its institutions—which implies an understanding of the whole as well as its parts—is not an easy task, yet it is precisely what is required in a day of ideological warfare.

Economic understanding is a must for management. The decision-making function is inevitably associated with the complex of factors and forces which provide the economic climate in which business operates. The fact that this climate is increasingly determined by the actions of those outside the immediate business community, notably by various levels of government, is all the more reason for inquiry and understanding.

To meet the demands for economic literacy, a wide variety of adult programs have been developed by various companies, foundations, educational institutions, and others. While there are significant differences in content, methods employed, and level of approach involved, all of these programs propose to "do something" to further understanding of fundamental economics. Most of these programs are designed to reach the average adult employee. Unfortunately, we do not yet have an adequate measurement of the effectiveness of some of these programs. The fact that such programs continue to expand, however, is evidence of both the need for understanding and a favorable response on part of the participants.

Among management groups there has been an interesting growth of economics seminars or economics round-tables in recent years. The fact that this trend is continuing is evidenced by the recent inauguration of a program of economics seminars by the Society for Advancement of Management, under a grant from the Lincoln Foundation. As an organization dedicated to furthering executive development and improving the quality of leadership in modern management, SAM is to be congratulated upon this new program. It is conceived that the economics seminar will provide the device through which the widely-recognized need for economic understanding can be met in part. Such a program offers a considerable challenge to the executive interested in exploring the basic economic issues of our day.

ROBERT H. LAWS

One year ago it was learned that the Lincoln Foundation of Cleveland, Ohio, was interested in providing funds to The Society for Advancement of Management for the purposes of better economic understanding by people at all levels. It was thought that the SAM Chapters, spread across the nation and composed of representative citizens in every type of American community, would provide the ideal medium through which to discuss impartially the basic factors bearing on economic existence.

Last April the Board of The Society adopted the program. Professor Robert Laws was selected by the Lincoln Foundation and The Society for the purpose of implementing this program through the Chapters.

The program as now organized consists of:

Round Tables of not more than 15 people.

Each Round Table group consisting of a group from the same general economic level.

The groups meet in seminar fashion for a two-hour session, one night a week for 10 weeks. The seminars are purely of the discussion type, or question-and-answer meetings.

No outside reading is required; no books or other printed material; there are no other "props."

Professor Laws is at present conducting seminars in the Chicago-Milwaukee area. Beginning in January, he will be working out of the SAM National Office in New York City, from which he will conduct seminars organized by Chapters in that area for three or four months. After that time Professor Laws will be available to Chapters in the Philadelphia-Washington area.

Official Release:

Operations Research

Some say it is Scientific Management under a new name. Call it what you will, but Operations Research, or "Opsearch" as a specially designated field has been receiving increasing attention for its industrial applications particularly since its dramatic accomplishments in improving military operations. The experts disagree among themselves on just what is Operations Research. As a first approximation, however, its purpose is to aid management make decisions. This is accomplished by the application of a host of new techniques, usually by teams of different types of social scientists, to the study of variations in the operations of large organizations.

Because of the mounting interest, the S.A.M. held an afternoon session on Opsearch at its October Conference at the Hotel Statler in New York. This session, organized by Jack Dunlap, President of Dunlap & Associates, offered some 600 attending executives a short, fundamental, and authoritative introduction to Opsearch. Talks were given by West Churchman, Director of the Operations Research Group, Case Institute of Technology and David Hertz, Director of Engineering, Plastics Div., Celanese Corp.

Anticipating a demand for still more information, the S.A.M. has arranged a two-day conference on Operations Research at the Park Sheraton Hotel in New York on January 28-29, 1954. This conference, being organized by Lincoln Clark, Professor of Marketing, Graduate School of Business Administration, New York University, will be as follows:

THURSDAY, JANUARY, 28

9:30 **Introduction To Operations Research**
Lincoln Clark, Chairman, Professor of Marketing, New York University
What Has Operations Research Accomplished in America?
Robert F. Rinehart, President, Operations Research Society of America
What Has Operations Research Accomplished in Great Britain?
Roger T. Eddison, Director, British Iron and Steel Research Association

12:30 *LUNCHEON—Bruce Payne, Chairman, President, SAM*
Operations Research In Industry
Ellis A. Johnson, Director, Operations Research Office, The Johns Hopkins University

2:15 (1) **Accomplishments Of Operations Research On Production Problems**
Arthur A. Brown, Chairman, General Electric Company
Case Illustrations By: *(speakers to be selected)*

2:15 (2) **Accomplishments Of Operations Research On Finance Problems**
Alfred N. Watson, Chairman, Executive Vice-President, Wesleyan Univ. Press
Case Illustrations By: *(speakers to be selected)*

2:15 (3) **Operations Research Techniques**
George E. Kimball, Chairman—Professor of Chemistry, Columbia University
Design Of Experiments
Cuthbert Daniel
Waiting Problems
George P. Wadsworth, M.I.T.
Linear Programming *(speaker to be selected)*

5:00 *COCKTAILS*

FRIDAY, JANUARY, 29

9:30 (1) **Accomplishments Of Operations Research On Marketing Problems**
John B. Lathrop, Chairman—Arthur D. Little, Inc.
Case Illustrations By:
John F. Magee, Arthur D. Little, Inc.
G. P. O'Donnell, Atlantic Refining Co.
Horace C. Levinson, National Research Council

9:30 (2) **Accomplishments Of Operations Research On Inventory Problems**
Michael Schiff, Chairman—N.Y.U.
Case Illustrations By:
Kendrick Porter, Lester B. Knight, Inc.
Mel Hurni, General Electric Co.
Herbert F. Mitchell, Jr., Remington Rand

9:30 (3) **Operations Research Techniques**
W. E. Deming, Chairman—N.Y.U.
Symbolic Logic
Edmund C. Berkeley, Edmund C. Berkeley & Associates
Decision Theory
George E. Kimball, Columbia University
Information Handling *(speaker to be selected)*

12:30 *LUNCHEON—Harold F. Smiddy, Chairman—Vice President, General Electric Co.*
Future Applications Of Operations Research
Philip M. Morse, M.I.T.

2:15 *PANEL DISCUSSION ON:*
Administration Of Operations Research
C. West Churchman, Chairman-Director, Case Institute of Technology
Jack W. Dunlap, Dunlap and Assoc.
David B. Hertz, Director of Engineering, Plastics Division, Celanese Corp.
John W. Pocock, Booz, Allen and Hamilton

Registrations

Due to limited Conference room accommodations, registrations will be accepted in the order received. Registration fee covers all sessions, two luncheons and cocktails—$85.00. Make checks payable to: Society for Advancement of Management, 74 Fifth Avenue, New York 11, New York.

CIPM Reports . . .

Austrian Seminar Relates Sales Methods to Productivity Increase

The seminar on marketing and distribution, held at the request of the League of Austrian Industrialists and the Austrian Productivity Center at the Austrian summer resort of Gmunden last June, was one of the most successful seminars ever conducted by CIPM for the Foreign Operations Administration.

The seminar was attended by over two hundred leaders in Austrian management. Recruited as a team to lead the seminar were five prominent American experts in marketing, sales management, advertising, retail merchandising, and market research. They were Dr. Glenn N. Merry, President of the Merry Coal Mining Company; Harold L. DeBenham, Manager, General Sales Department of Sunshine Biscuit Company; Anson G. Lowitz, vice-President of Foote, Cone and Belding; Charles G. Nichols, President of the G. M. McKelvey Company (Youngstown, Ohio); and Kenneth G. Stuart, Director of Market Research, Eastman Kodak Company.

The specific objectives of the seminar were to exchange, through discussion, marketing and distribution ideas and information, techniques and general know-how, and to give any specific assistance possible on cases or problems raised by the Austrian participants. The immediacy and importance for such a seminar was recognized by the Austrian Productivity Center as it realized the futility of increased productivity without a parallel emphasis on the methods of selling which would absorb this increased productivity.

The first problem for the American team was to interpret to Austrian business leaders the factors which make up the general marketing policy followed in the United States. The other principal problem was one of making recommendations for improved Austrian marketing methods. The latter problem required a modesty and finesse on the part of the team members which would gain the respect and confidence of the Austrian participants, and which would take into account basic sociological differences between the two countries. In other words, it would be sheer folly, as well as unmitigated arrogance, if the team should imagine that the American methods of marketing could be transplanted *in toto* to the Austrian social and economic system. Almost any recommendations offered would have to be modified by Austrian businessmen to fit the particular needs and situations existing in their own country.

The seminars were organized on a one week basis, and were repeated over a period of three weeks. At each seminar, the registrants were divided into four groups which rotated among the team members for the first four days of the week. Headsets were given to each participant, and the services of skilled interpreters provided simultaneous English-German translation at all the meetings. Lively informal discussions among the registrants, as well as the required exposition by the American leader, were the order of procedure.

After the conclusion of each of the four day sessions, a final convocation was held on Friday for all the registrants. At this time, each member of the American team presented his own summation and evaluation of the meetings of that week.

A special feature was introduced at the close of every Friday meeting by Mr. Nichols. He introduced a typical American commodity to the Austrians in a most successful effort to show the effectiveness of good merchandising.

The commodity was "cheesecake" in the appearance of "Miss Europe of 1951." His point was two-fold: first, to demonstrate the effectiveness of "visual-aid" as a technique of salesmanship (in this case to the Austrians themselves); and second, to demonstrate in a practical way how the desire for better living —created by good advertising and marketing practices that reach the consumer—can be translated into a desire on the part of women (who buy 85 per cent of the merchandise sold) to work toward a better job and higher income that will make it possible for them to have these things.

With the cooperation of a Viennese department store and the services of Miss Europe, Mr. Nichols told a graphic story of a peasant girl whose desire for more money and the things it could buy was aroused by clever merchandising techniques. During the demonstration, Miss Europe appeared in successive stages of clothing transformation ranging from a typically rough cotton peasant dress with felt shoes, cotton stockings, and cloth head scarf to a chic but inexpensive evening grown with attractive accessories.

The result was a triumph of salesmanship and instructive skill. The entire seminar, for that matter, was an example of organization, participation, and results which are likely to have a tangible influence on the future of Austrian marketing practice.

Since the complete written report of the seminar is now in the hands of CIPM, a summary of the team's recommendation to the Austrian members may be made as follows:

1. Austrian business leaders should cultivate more self-confidence and optimism in their business activities.
2. National and local associations of business leaders — particularly in the field of marketing—must be organized and promoted.
3. The decisive purchasing power and consumer demands of women must be recognized and promoted.
4. Such restrictions as cartels, high taxes and business secrecy, which hamper the growth of a dynamic economy, must be gradually removed.
5. Retail store hours in Austria must be adjusted to better meet the wishes and needs of the consumers.
6. Methods of pricing articles should be revised in an effort to arrive at prices which sell the most goods at a reasonable profit.
7. Advertising agencies should handle all aspects of the client's advertising program.
8. The position and importance of the salesman should be stressed more, his salary increased, his training intensified.
9. Consumer credit facilities should be improved and promoted.
10. There must be a keener recognition that every Austrian is a potential market, not just the wealthier classes.
11. "Industrial planning should incorporate every aspect of business management with emphasis on an organized and complete marketing program, since production and selling are inseparable."

ROBERT GLEASON

AM Advertising Review . . .

Consumer Spending 1952 Reaches An All-time High

In July the U. S. Department of Commerce released a report covering consumer expenditures for 1952. The total for 167 categories was $218,130,000,000, an all time high for our 160,000,000 men, women and children.

About 90 per cent was spent on six items. Food, clothing, rent, household operation, transportation and medical care.

The distribution of the remaining 10 per cent provides "food for thought." $11.7 billions was spent for "Recreation." This was five times as much as the $2.1 billions spent for religious and welfare activities, or the $2.2 billions for private research and education.

Over $1 billion went for foreign travel. Football and baseball games accounted for $164 millions. Golfers laid out $169 millions for green fees, caddy fees and instruction. "We even parted with $150 millions, to the point of no return, in the form of coin machine receipts, minus payoffs." This quote appeared in the Cleveland Trust Company bulletin, from which the foregoing statistics were obtained.

Since 1940, total personal consumption spending has increased 203 per cent. Since 1940 our national advertising expenditures have jumped from $5 billions in 1940 to over $8 billions in 1952.

During the past 12 years the more than 2,000 business publications of this country have done much to help advertising agencies and producers of all types of consumer goods.

ADVANCED MANAGEMENT is unique in the field of business publications. Its readers—practically all are members of SAM—are constantly seeking information that will enable them to produce better goods at a lower unit cost when the finished article reaches the shipping platform.

SAM members now meet with purchasing committees in their respective plants. Their training, and the fact that they are interested in scientific management, enables them to give sound advice and counsel when a purchase of any item is under consideration.

The Advertising Department of ADVANCED MANAGEMENT, under the direction of this reporter, is now working on a detailed analysis of the entire membership of SAM.

In an early issue of AM a condensed report will be released so that advertisers and their agencies can see at a glance the percentage of actual buyers of goods and services now enrolled as active members of the Society.

Advertisers and their agencies who have not yet used ADVANCED MANAGEMENT to win new customers, or who seek information and suggestions about how they might use AM continuously, are invited to visit our Research Department.

Those who cannot visit us at our New York office will receive a prompt reply to any questions they would like to have answered.

This service is confidential, costs nothing, and is available to any manufacturer or service organization.

FRANK E. FEHLMAN

BOOKS FROM CHICAGO

Communication in Management

By CHARLES E. REDFIELD. Introduction by John L. McCaffrey, President, International Harvester Co.

An indispensable handbook for the executive; a complete guide to the principles and practices of effective administrative communication, including order-giving, reports, the conference process, handling of complaints and suggestions, construction of manuals and handbooks, and employee opinion polling. $3.75

Japan's Natural Resources

By EDWARD A. ACKERMAN. For business men interested in import-export prospects in Japan. Vital data on agriculture, forestry, fisheries, mineral industries, energy sources. Potential productive capacity, technical improvement, economics. Numerous maps, graphs, charts, photographs. $25.00

The Uneasy Case for Progressive Taxation

By WALTER J. BLUM & HARRY KALVERN. An extremely timely examination of the arguments, pro and con. $2.50

At your bookstore, or from
THE UNIVERSITY OF CHICAGO PRESS
5750 Ellis Ave., Chicago 37, Illinois

The Management Bookshelf . . .

New Book Assembles Basic Principles and Methods Of Creative Thinking

APPLIED IMAGINATION, *by Alex F. Osborn. 317 pages. $3.75. Charles Scribner's Sons, New York City.*

The co-founder of Batten, Barton, Durstine and Osborn, Inc., has brought his 40-odd years of creative experience into sharp focus to give the business and academic worlds the first book of principles and procedures of creative thinking.

The bulk of the text develops the rising succession of rungs in the ladder of the creative thinking process. Mr. Osborn develops the primary stages of orientation, preparation and analysis, then the intermediate stages of hypotheses, incubation and synthesis, through to the final processes of evolution and verification.

Throughout the text of Applied Imagination, Mr. Osborn includes a series of problems; questions which require the reader to respond with his own powers of creative thinking. Mr. Osborn's experience as a teacher affords him the technique necessary to stimulate the imagination and the subsequent maturation of the ideas engendered.

Retired Executive Reviews Forty Years of Successful Business Leadership

THE WHOLE MAN GOES TO WORK, *by Henry L. Nunn. 214 pages. Harper & Brothers. New York. $3.00.*

Henry L. Nunn, former president of the the Nunn-Bush Shoe Company, demonstrated his strong democratic convictions by making them a part of his own relations with the workers of his plant. He had faith in the process which motivates the nation, pioneered in showing that industrial democracy could be made to function.

In his autobiography, *The Whole Man Goes to Work*, Mr. Nunn reviews the forty years of a career that began in a small town in Texas, developed into a bright prospect of executive attainment only to be interrupted by an illness that forced him to begin a second time. Mr. Nunn rose from a job as a taxi driver to the head of a well-known shoe manufacturing company, where he had the opportunity to put into practice his deeply-felt beliefs; his enlightened program of labor-management relations.

Communications System Should Be Designed to Fit Bigness Of American Business

COMMUNICATION IN MANAGEMENT, *by Charles E. Redfield. xvii. 290 pages. The University of Chicago Press. $3.75.*

Bigness is typically American. A man long in intimate contact with business, public housing, industrial welfare, metallurgy, and military government shows us how we may still reap from bigness the fruits expected from it. But only after we take increasing care of communications.

Bigness renders business, government agencies, and the Armed Forces easy prey to failures in communication. The results are sometimes humorous, often disastrous. Redfield cites concrete cases of such failure in these fields, draws upon recent and relevant research in communication theory, and makes simple-to-implement suggestions to many types of management for excising the bottle-necks and avoiding the confusions.

In any purposive communications system are three kinds of signals: (1) those going downward and outward: from the executive to his subordinates, from central headquarters to stations in the field, etc., (2) those going upward and inward: the feed-back of reports which, when evaluated, will tell of the successes or failures of previous executive decisions and afford data for the making of new ones, and (3) those which flow horizontally: the staff messages which knit the separate and perhaps proliferating elements of the system into a working whole, involved in the processes of conferring, clearing, evaluating, and reviewing. The author explains the techniques pertinent to each of these categories of communication (and for each chapter provides an extensive bibliography for related reading)—order-giving, circulars and signs, manuals and handbooks, information-gathering, reports, interviews, polls, grievance and suggestion procedures, conferences—with appraisals of each garnered from theory and checked by solid experience.

The suspicions of those old-fashioned enough to be leary of the huge and time-consuming sea of words with which the technologies of telephone, teletype, telegraph, printing, and the electronic tube surround us are triumphantly corroborated: more words can hinder rather than help. For the prevention of these word-clogged channels of communication Redfield gives expert guidance in what to tell, how much to tell, whom to tell, and when.

—JOHN R. KIRK

Book on Collective Bargaining Gives Valuable Information On Both Sides of Problem

COLLECTIVE BARGAINING: NEGOTIATIONS AND AGREEMENTS, *by Selwyn H. Torff. 323 pages. McGraw-Hill. New York. $6.00.*

This practical and objective work gives a concise, clear, and comprehensive treatment of the entire collective bargaining relationship as it operates in the United States, and stresses the negotiation of agreements.

All major topics and issues are set forth. Positions taken by employers and unions, and supporting arguments advanced by both sides, are taken up along with solutions commonly accepted. Many typical specimen clauses are included. Effects of adoption of particular types of labor contract clauses on management and union functions and policies are thoroughly considered.

The book is superbly objective, and all situations are analyzed in detail. Federal and state laws affecting collective bargaining are discussed. Serious reading, and valuable to executives who have or need to attain knowledge in the changing, difficult area of management-union relations.

PROFESSIONAL NOTICES

GEORGE H. ELLIOTT and Company
CONSULTING MANAGEMENT ENGINEERS
521 Fifth Avenue, N. Y. 17 • MU 7-5768

GRIFFENHAGEN & ASSOCIATES
Established in 1911
CONSULTANTS IN MANAGEMENT
Advice and technical assistance on problems of policy, organization, procedure, personnel, and finance.
Chicago New York Boston
Washington Milwaukee Los Angeles

CAREER POSITIONS
For Industrial Engineers and Industrial Relations Men
GEORGE A. SHANNON
Agency
11 WEST 42nd ST., N. Y. C. CH 4-6576

HOTEL ESSEX HOUSE
1050 Broad Street at Lincoln Park
Newark, N. J.
Fred Kalmus, General Manager
Largest and Most Complete Catering, Banquet, Ballroom, and Meeting Facilities
"Where the Northern New Jersey S.A.M. Chapter Meets"
Home of THE "CAROUSEL"
Newark's most beautiful Cocktail Lounge and Supper Club
For inquiries and reservations
Telephone MItchell 2-4400

DR. ROY HERRMANN
Economist and Management Consultant
501 Fifth Avenue
New York 17, N. Y. MU 2-3077

Order Now . . .
1953 SAM
Management Conference
Proceedings

MECHANICAL—MANAGEMENT—ELECTRONIC
PROCESS — DESIGN — QUALITY CONTROL
INVESTIGATIONS — APPRAISALS — REPORTS
JOHN I. THOMPSON & COMPANY
ENGINEERS
921 - 17th STREET, N.W., WASHINGTON 6, D.C.
LABORATORY DIVISION: BELLEFONTE, PA.

BRUCE PAYNE and ASSOCIATES Inc.
WESTPORT 1, CONN.
BOSTON 16, MASS.
CHICAGO 1, ILL.
ATLANTA 5, GA.
MANAGEMENT CONSULTANTS

CLASSIFIED

POSITIONS OPEN

Clerical Methods Analyst

Established consulting firm has career opportunity for man with experience in clerical work measurement, including experience in work simplification and performance standards. Write giving personal history and work experience, also phone number. SAM Box 371-O.

Need a good man?

. . . use AM

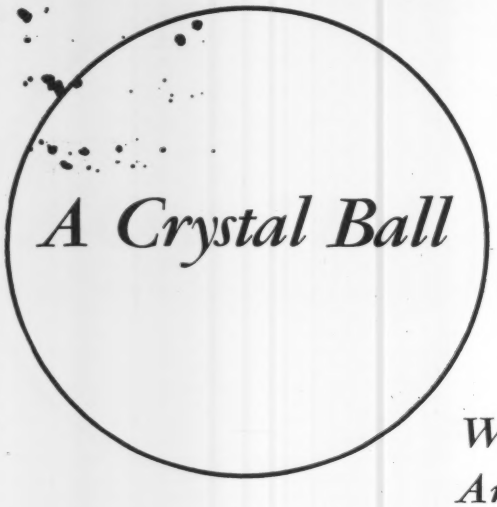
RATES Classified insertions are billed at $1.50 a reading line per issue for Positions Open and at $1.00 for Positions Wanted. Lines average five words. A heading in bold type counts as two lines. There are 7 lines to the inch. Minimum insertion charge, five-line basis. Display advertisements are carried in this issue at a minimum of 1½ inches. Copy must reach us not later than the 5th of the month preceding date of publication.

Answers to box number advertisements should be addressed to given box number, care of ADVANCED MANAGEMENT, 74 Fifth Avenue, New York 11, N. Y.

POSITIONS WANTED

Young Man with unusual educational background and experience in statistical and administrative research as well as accounting desires position which offers opportunity to use own IMAGINATION AND INITIATIVE. SAM Box 374-W.

Engineering graduate with 3 years experience, plus masters degree in Education and 2 years of Test Administration experience desires Industrial Counselling or Administrative Position. SAM Box 372-W.



A Crystal Ball Would Tell You Less . . .

What would you give to know the new directions American management will take in 1954?

How are top-flight executives in business and industry planning to solve problems which will face your company in the future?

SAM PROCEEDINGS

On October 29th and 30th SAM assembled men who have made it their business to know the nature of new problems which will confront managers in the future. SAM wanted to know how they planned to meet these problems, and got concrete answers about new techniques they have developed for solving old problems as well as new.

Their answers and subsequent group discussions are recorded in the 1953 SAM MANAGEMENT CONFERENCE PROCEEDINGS. A limited edition of PROCEEDINGS will be available to those not attending the conference in person.

Make your application now, assure yourself the benefits of this vital, first-hand information.

I would like to place an order for ..... copy (copies) of
1953 SAM MANAGEMENT CONFERENCE PROCEEDINGS
($3.50 to SAM members, $5.00 to non-members)

☐ Find Check enclosed
☐ Please bill me

NAME.....

ADDRESS.....

.....

make checks payable to
Society for Advancement of Management, 74 Fifth Ave., N.Y. 11, N.Y.